

Message Center for DirectTalk[®]



Administrator's Guide

Version 6 Release 4

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Version 6 Release 4

Note: Before using this information and the product it supports, read the information under "Notices" on page 303.

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This edition applies to IBM® Message Center for DirectTalk® Version 6 Release 4 (program number 5697-F64) and to all subsequent releases and modifications until otherwise indicated in new editions. Make sure you are using the correct edition for the level of the product.

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About this book

IBM Message Center for DirectTalk: Administrator's Guide tells you how to administer IBM Message Center for DirectTalk: how to install and configure it, and how to manage it on a day-to-day basis.

IBM Message Center for DirectTalk is an application that runs on:

- IBM DirectTalk for AIX® Version 2 Release 2

Throughout this book, we refer to IBM Message Center for DirectTalk as **Message Center**. We refer to all IBM DirectTalk for AIX system as **DirectTalk**, except where we need to distinguish between particular releases of the product.

Note: You may know IBM DirectTalk for AIX Version 2 Release 2 as Corepoint Voice Response Version 2 Release 2, a name by which it used to be known. Both names refer to the same product.

Who should read this book

This book is for anyone who installs and configures Message Center, and provides systems administration and operations support.

This book assumes that you are already familiar with Message Center, and have planned to install and operate it. If you are new to Message Center, read *IBM Message Center for DirectTalk: General Information and Planning* before you start to use this book.

To use this book you should also be familiar with AIX for use on the RS/6000® computer, AIXwindows®, and DirectTalk for AIX. You also need a basic knowledge of telephony and an understanding of the connectivity of your switch.

How to use this book

This book contains procedures and reference information. The procedures explain how to complete the tasks for which you are responsible.

Typographical conventions

This book uses the following typographical conventions:

boldface

Identifies an **item** in a DirectTalk for AIX window. The item could be a keyword, an action, a field label, or a pushbutton. Whenever one of the steps in a procedure includes a word in boldface, look for an item in the window that is labeled with that word.

boldface italics

are used for emphasis. ***Take extra care*** wherever you see bold italics!

italics identify one of the following:

about this book

- New *terms* that describe Message Center components or concepts. A term printed in italics is usually followed by its definition, or has a definition in the glossary.
- *Parameters* for which you supply a value.
- References to other books.

monospace

Identifies text you must type in an AIX window. Because AIX is case sensitive, make sure that you type the uppercase and lowercase characters exactly as shown.

Following the procedures in this book

The procedures assume that you are already familiar with using a mouse and window environment and that you know how to use the common actions such as **Save** to work with information. If you are new to DirectTalk for AIX, have a look at the *DirectTalk for AIX: User Interface Guide*, which tells you how to log on and log off, and use the DirectTalk for AIX windows efficiently.

Where to find more information

Apart from this and other books in the Message Center library, your main source of information is likely to be the DirectTalk for AIX library. Becoming familiar with the DirectTalk for AIX library will help you accomplish tasks quickly.

The books in the Message Center library are available in Adobe Acrobat format for viewing online. Acrobat format is also known as Portable Document Format (PDF). You can read these books using the Acrobat Reader (or in a Web browser with the Acrobat Reader as a plug-in) available from Adobe Systems.

You can find the Acrobat versions of the Message Center books from our Web site at <http://www.ibm.com/software/>. Follow the link to Enterprise Products and then to Message Center.

All the books are available in PDF format; only *IBM Message Center for DirectTalk: General Information and Planning* is available as a printed book.

- *IBM Message Center for DirectTalk: General Information and Planning*, GC34-5521
- *IBM Message Center for DirectTalk: Administrator's Guide*, SC34-5488
- *IBM Message Center for DirectTalk: Subscriber's Guide*, SC34-5681

DirectTalk base software

- *DirectTalk for AIX: General Information and Planning*, GC33-1840
- *DirectTalk for AIX: User Interface Guide*, SC33-1841
- *DirectTalk for AIX: Installation*, GC33-1842
- *DirectTalk for AIX: Configuring the System*, SC33-1843
- *DirectTalk for AIX: Managing and Monitoring the System*, SC33-1844
- *DirectTalk for AIX: Designing and Managing Applications*, SC33-1845

- *DirectTalk for AIX: State Tables, Prompts, and Voice Segments*, SC33-1846
- *DirectTalk for AIX: Custom Servers*, SC33-1847
- *DirectTalk for AIX: 3270 Servers*, SC33-1848
- *DirectTalk for AIX: Problem Determination*, GC33-1849

IBM hardware for use with DirectTalk

- *IBM Digital Trunk Quad Adapter: Installation and Service Guide*, SY33-2119 (DTQA)

DirectTalk optional features

- *DirectTalk for AIX: GeoTel Custom Server User's Guide*, SC34-5317
- *DirectTalk for AIX: Programming for the ADSI Feature*, SC34-5380
- *DirectTalk for AIX: Programming for the Signalling Interface*, SC33-1851
- *DirectTalk for AIX: ViaVoice Speech Technologies for AIX*, SC34-5798

DirectTalk related products

- *DirectTalk for AIX: Digit Speech Recognition*, SC34-5690

Making comments on this book

If you especially like or dislike anything about this book, feel free to send us your comments. You can comment on what you regard as specific errors or omissions, and on the accuracy, organization, subject matter, or completeness of this book. Please limit your comments to the information in this book only and the way in which the information is presented. Speak to your IBM representative if you have suggestions about the product itself.

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Chapter 1. Installing Message Center

Assuming you are familiar with the capabilities of Message Center and have planned for its implementation, you are ready to start installing it. (If you're not sure that you're ready, look in *IBM Message Center for DirectTalk: General Information and Planning*.)

You must plan the installation process too, particularly if you are replacing another voice mail system, or a previous release of Message Center that is already in production. Read through this chapter before you start, to get an idea of what you're going to have to do.

If you are replacing a voice mail system that is already in production, you must plan the migration very carefully and ensure that the subscribers are well-prepared for any changes, and aware of the migration itself, even if you intend it to be transparent to them. Ideally, you should thoroughly test the whole new system before moving any of the subscribers to it.

Note: Your copy of Message Center is licensed for use with an explicit number of mailboxes. Exceeding this number is an infringement of your license agreement. Check with your IBM representative if you are in doubt about the number of mailboxes your license specifies.

Installing the basic system

These are the steps you must perform before Message Center is operational. At the end of this procedure, the system will be capable of handling messages from internal and external callers, but will not be capable of exchanging messages with other voice mail systems. Many of the steps refer to more detailed information elsewhere; make sure you have a copy of *DirectTalk for AIX: Installation* before you start. You might also need some of the following books:

- *IBM AIX Version 4.2: Installation Guide*, SC23–2550
- *IBM AIX Version 4.2: Quick Installation Guide*, SC23–2650
- *IBM AIX Version 4: Getting Started*, SC23–2527
- *IBM AIX Version 4: Topic Index and Glossary*, SC23–2513
- *DirectTalk for AIX: State Tables, Prompts, and Voice Segments*
- *DirectTalk for AIX: Designing and Managing Applications*
- *DirectTalk for AIX: Configuring the System*

1. Migrating from a previous release

When you are migrating to a new version of DirectTalk, or from a version of DirectTalkMail, or an earlier version of Message Center such as Version 6 Release 3, to Message Center Version 6 Release 4:

1. To migrate to a new version of DirectTalk, follow the instructions in *DirectTalk for AIX: Installation*. Use the full system save-and-restore method of migration. If possible, use two RS/6000s, keeping your production system running on the first and installing the new system on the second. If you have only one RS/6000, save

installing the basic system

the previous release of Message Center or DirectTalkMail and restore it after you have installed the new release of DirectTalk. Then copy your local modifications to a safe place. Only then should you install and import Message Center.

The *DirectTalk for AIX: Installation* procedures you should follow are:

- Calculating space for the new software
 - Archiving your reports and log files (if necessary)
 - Starting the migration process
 - Saving your current data
2. Where necessary, use the utilities described in “Migrating to IBM Message Center for DirectTalk Version 6 Release 4” on page 293.
 3. If you intend to move multiple standalone systems with previous releases of Message Center or DirectTalkMail to a single system image (SSI) cluster, first migrate each standalone system to DirectTalk Version 2 Release 2 and Message Center Version 6 Release 4. Then create the single system image, as described in “Migrating to a single system image” on page 11.

2. Installing the licensed programs

Follow the instructions in *DirectTalk for AIX: Installation* to install the correct level of the AIX operating system, any other licensed programs you require (for example, NetView for AIX, SNA Server for AIX, Ultimedia Services for AIX), and the new release of DirectTalk itself.

Note: If you want to modify any of the Message Center custom servers you must have a C or C++ compiler installed on the system on which you customize the Message Center application. However, the compiler is not required for a production system, so you do not need to install it on your production Message Center systems.

3. Restoring the system you saved earlier

At this point, if you have a production system based on a previous release of DirectTalkMail and you want to keep it running on the same RS/6000 while you install, configure, and test the new release:

1. If you are migrating to a new version of Message Center or DirectTalk, restore the system you saved in “1. Migrating from a previous release” on page 1. Follow the instructions in *DirectTalk for AIX: Installation* (“Restoring the data you saved”).
2. If you have customized versions of state tables, custom servers, prompts and voice segments, copy them.

4. Installing the Message Center option

Now you can install the Message Center *licensed program product* (LPP) from CD-ROM using the *System Management Interface Tool* (SMIT). This also includes the *Message Center Interface Tool* (MCIT):

1. For an SSI client that has not previously had Message Center installed on it, and does not contain any Message Center data, you need only install the dirTalk.MessageCenter.base file set. All the configuration for an SSI client is done at the SSI server; the remaining steps need to be done only on the server.

- For any other system, including SSI server and standalone, install both the dirTalk.MessageCenter.base and dirTalk.MessageCenter.rte file sets.

5. Installing the National Language Support (NLS) options

If you want to support languages other than the basic Message Center option (U.S. English) you must install the language package of your choice. Select the package dirTalk.MessageCenter, adding the appropriate language suffix, for example dirTalk.MessageCenter.fr_FR. for French, as listed in Table 1:

Table 1. NLS Options

Language	Suffix
French	fr_FR
German	de_DE
Italian	it_IT
Korean	ko_KR
Japanese	ja_JP
UK English	en_GB
US English	en_US

Note: Language packages cannot be run independently and must only be installed as an addition to the basic Message Center option.

However, DirectTalk is not fully NLS enabled and therefore the DirectTalk administration screens will be shown in English.

6. Testing the DirectTalk installation

- After you've installed the software, continue to follow the procedures in *DirectTalk for AIX: Installation* ("Starting DirectTalk" and "Testing the installation") until you can make a call to DirectTalk and hear the "Welcome to IBM AIX DirectTalk/6000" message. Then, if telephony is working, continue with the installation of Message Center.
- Read the latest information about Message Center in the README file in the /usr/lpp/dirTalk/sw/MessageCenter directory.

7. Importing the Message Center application

- Because it is a DirectTalk application, Message Center is supplied as an import file in the /usr/lpp/dirTalk/sw/MessageCenter/imp directory.

The Message Center import file is MessageCenter_64.imp. Other files in this directory are the language import files. Importing the file creates a new application called MessageCenter.

If you are unfamiliar with the procedure for importing applications, use the instructions in *DirectTalk for AIX: Designing and Managing Applications*.

- The import process copies all the individual components of the voice application into DirectTalk. Use the Application Manager to view the Message Center application.

installing the basic system

Note: If you have IBM DirectTalkMail installed, you might have a voice directory, with the result that you get error messages during the import. Just follow the instructions in the error message to renumber your existing voice directory IDs.

3. The Message Center software is now installed, but before you configure and test the system, you need to consider the telephony changes to make on the switch to route calls successfully to the Message Center system. An overview of these changes is shown in Figure 1.

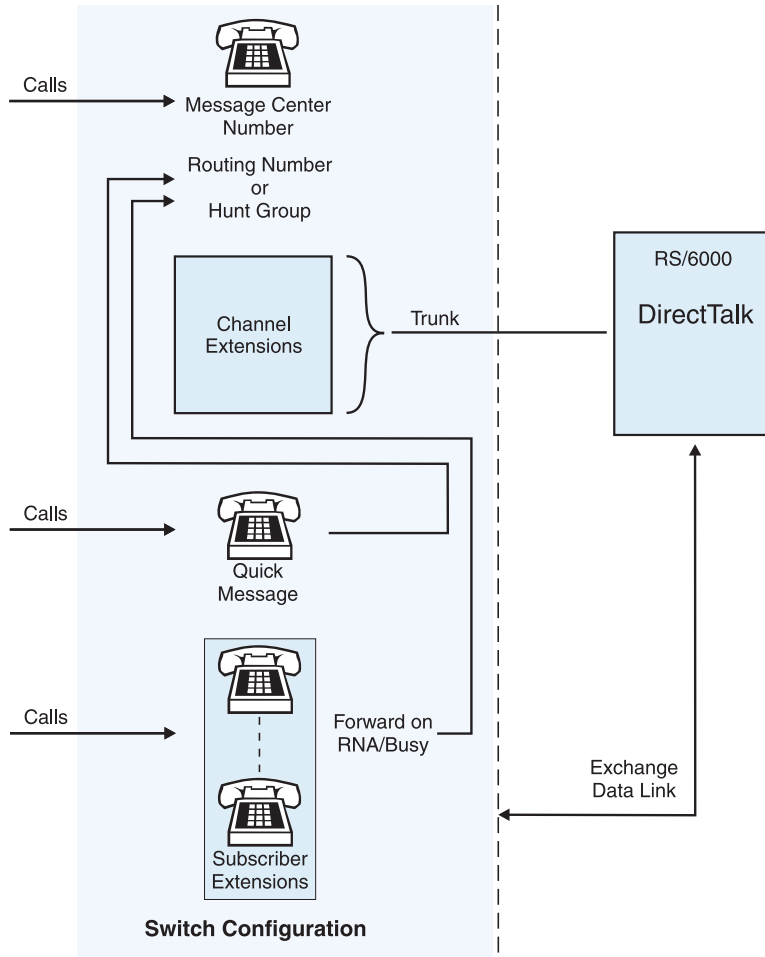


Figure 1. Overview of possible switch configurations

In addition, when using many of the *channel associated signalling* (CAS) protocols, called and calling number information is not passed from the switch to Message Center using the trunk; this information will need to be carried over an *exchange data link* (EDL). If the message waiting indication selected is either a message waiting light or stutter dial tone on the telephone handset, message waiting

commands might also be passed over this link from Message Center to the switch. For an introduction to EDL, see *DirectTalk for AIX: General Information and Planning*.

You need to configure your switch to route calls to Message Center. Discuss these requirements with your switch representative:

- a. Select a number to be your Message Center number. This is the same number as the **VmailExtension** value in the GlobalVariables section of the file `$CUR_DIR/ca/ini/IMC_MessageCenter.ini`.
Define this number to route calls to the trunk (or trunks) connecting the switch to the Message Center system. How you do this depends on the switch you are using. For example, on the AT&T G3 and the Ericsson MD110 this number is defined as a hunt group, but on the Siemens Hicom it is defined as a routing number.
If you are using alternative voice mail numbers, (AltMailExt1, AltMailExt2, and AltMailExt3) you need to define these too.
- b. If you are using a hunt group, add the extension numbers allocated in the switch to the channels on the trunk (or trunks) to the hunt group as in step a.
- c. If you are using the quick message facility, define a number as your quick message number (see “Quick message application profile” on page 15). Set this number to forward immediately to the Message Center number.
- d. Change all user numbers so that they forward to the Message Center number on busy, ring-no-answer, and manual call forward.

When you are implementing the Message Center system, you might find it easier to add users to the system in groups. This should help to manage initial user problems, and allow users access to the system only after receiving training. To do this, you might need to state the extension forwarding configuration on the switch.

8. Importing Additional Languages

To import additional languages into your Message Center application run the script `import language suffix` from the `/usr/lpp/dirTalk/tools` directory. For example to import the Italian files run `import.it_IT`. This will define the language in DirectTalk, and import all the required files.

If you prefer to manually import the language files, first define the language in DirectTalk following instructions in *DirectTalk for AIX: Configuring the System*. Import the files in the `/usr/lpp/dirTalk/sw/MessageCenter/imp/ language suffix` directory, ensuring that the merge option is selected for the import.

9. Installing Brooktrout Fax Support

Message Center contains support for the Brooktrout Fax server. To use the Brooktrout Fax server functionality, you must complete these tasks:

1. Installation of Brooktrout device drivers
2. Configuration of Message Center for TR114 Fax

installing the basic system

You must have already installed and started Message Center before proceeding to configure Brooktrout Fax support.

To install the Brooktrout device drivers the following steps must be taken:

1. Login to AIX as root
2. Type `cd /usr/sys`
3. Copy the Brooktrout device driver software from the CD-ROM entitled "IBM AIX Drivers for Brooktrout" by typing
`cp /BTcompiled.tar .`

This is shipped with your product order.

4. Type `tar -xvf BTcompiled.tar`
5. Type `cd /usr/sys/bfax/install`
6. Run the **dinstall** script by typing `./dinstall -n`

This script installs pre-compiled device drivers for the Brooktrout card and requires the installer to respond to a set of questions.

To install the Brooktrout Fax/Voice Device Driver Software Package Version 4.3.0, respond by accepting the default values except where otherwise indicated below:

How many total fax & voice channels do you want to support?

(1-96, default 16):

What interrupt line will the ISA fax/voice boards use?

-1 if no ISA boards (default 5): -1

What DMA channel will the ISA fax/voice boards use?

-1 if no ISA boards or no DMA channel (default 1): -1

Kernel buffer size:

(default 8192)

Kernel interrupt queue size:

(default 10)

Number of channels:

16

Interrupt line:

-1

DMA channel:

-1

Buffer size:

8192

Interrupt queue size:

10

Debug:

y, 200 0

If successful, **Brooktrout Fax/Voice Driver installed** will be displayed.

7. Type `./faxinit`

Data similar to that below should be displayed on the console:

```
PCI   TR114 port 7FFFC00, IRQ   9, 16 chans, Bus 1,Dev 24, Fn 0, Switch 0.
fax0  7fffc04 TR114+
fax1  7fffc08 TR114+
fax2  7fffc0c TR114+
fax3  7fffc10 TR114+
fax4  7fffc14 TR114+
fax5  7fffc18 TR114+
fax6  7fffc1c TR114+
fax7  7fffc20 TR114+
fax8  7fffc2c TR114+
fax9  7fffc30 TR114+
fax10 7fffc34 TR114+
fax11 7fffc38 TR114+
fax12 7fffc3c TR114+
fax13 7fffc40 TR114+
fax14 7fffc44 TR114+
fax15 7fffc48 TR114+
Total channels: 16 TR114; 0 TruFax; 0 TR112/TR111MC;
0 TR200
No BRI TR114s found.
```

8. Check that the device drivers have installed successfully by issuing the following commands:

`lsdev -C | grep bfax`

The console should display the following:

```
bfax0 Available xxxxx N/A
```

(where xxxxx is device-dependent)

`ls /dev | grep fax`

The console should display:

```
fax0
....
fax15
faxctl
```

For modifications to Brooktrout fax configuration parameters see “Modifying Brooktrout configuration parameters” on page 30

10. Modifying the `IMC_MessageCenter.ini` file

All of the configuration information that used to be stored in the startup state tables, `IMC_STARTUP` and `IMC_START_AA` has been moved to a centralized configuration file called `IMC_MessageCenter.ini` which is located in the directory `$CUR_DIR/ca/ini`. This file is a plain text file that is organized into sections with each section having a number of fields or variables and associated data, for example

installing the basic system

```
[Section1]
field1 = data1
field2 = data2
```

- Set **VmailExtension** to the phone number associated with Message Center itself. When the **CalledNumber** parameter is the same value as the **VmailExtension** parameter, Message Center plays the sign-on prompt, rather than playing a subscriber's greeting or the system default greeting.

If you are using *direct inward dialing* (DID), set **VmailExtension** to a valid extension number on your telephone switch. If you are using an auto-attendant or operator, you can choose any valid application profile ID. Make the number as short and easy-to-remember as possible. The default value is 111, which matches the supplied application profile ID.
- Set **AltVmailExt1**, **AltVmailExt2**, and **AltVmailExt3** to alternative extension numbers for DirectTalk, or to the same value as **VmailExtension**.
- Set **OperatorNum** to the number of the switchboard operator at your location. This is the default number to which a call is transferred if a caller chooses that option at any time before, during, or after leaving a message. Subscribers can set their own operator number (see the *IBM Message Center for DirectTalk: Subscriber's Guide*) to override the system default.
- If you are enabling any of the call transfer functions, make sure that **DisableCallSndr**, **DisableDeputy**, **DisableFax**, **DisableJumpout**, **DisableOperator**, **DisablePageMe**, **DisableReachMe**, **DisableReferral**, and **DisableXfer** are set as appropriate. See "Enabling call transfer functions" on page 18.
- Set **PartitionVisb** to determine the type of partitioning (inter or intra) to be used at your site. (See "System partitioning" on page 75 for information on managing your system partitions.)
- Set **TTS_Engine** to indicate the kind of text-to-speech engine you intend to use. You need a text-to-speech engine to play back e-mail retrieved from an IMAP4 or POP3-compliant e-mail server. Message Center currently supports the following products:

TTS_Engine Value	Product
1	BeST Speech from Lernout & Hauspie
2	AcuVoice Speech Synthesizer AV2001 for AIX from Fonix
3	ViaVoice TTS for AIX from IBM

You must, of course, install whichever text-to-speech engine you want to use, and ensure that it is working properly. Use the manufacturer's instructions for this.

- Make sure that you set appropriately other parameters in the GlobalVariables section. Pay particular attention to parameters such as **UniqueDlists**, **SysDistAllowed**, **FirstTimeUsage**, **MaxPWAttempts**, **ProfilePWLlimit**, **PwdExpiryDays**, and **GlobalPWLlimit**.

11. Modifying Global Variables

All of the variables that you need to modify at this point are in the GlobalVariables section.

12. Editing the call transfer state table

Edit the call transfer state table (IMC_XFER_DO), as discussed in “Implementing call transfer” on page 17.

13. Creating the application profiles

Create the application profiles required for Message Center operation (for background information, see “How Message Center uses application profiles” on page 13). The profiles you must create are:

- Application profiles for Message Center sign-on (up to four profiles, with IDs matching the numbers you specified in the Global Variable Modification section of MCIT).
- Application profiles that define mailboxes for test subscribers. You need two or three profiles, so that you can run the tests described in “16. Testing Message Center” on page 10.

Use the **adduser** or **addlist** commands for this; see “Adding a new subscriber (adduser)” on page 50 and “Adding a list of new subscribers (addlist)” on page 51.

Each test subscriber application profile needs a subscriber class, a password, and mailbox number 1 activated.

14. Implementing the exchange data link

If you are using an exchange data link or voice bridge, make sure that it is correctly installed and configured. (For the DirectTalk end, see *DirectTalk for AIX: Installation* and *DirectTalk for AIX: Configuring the System*.)

15. Setting system parameters

1. Ensure that the values of the following parameters are correct for your implementation of Message Center: from the DirectTalk Welcome window, click **Configuration → System Configuration → Change... → Application Server Interface**.

Password Minimum Length

DirectTalk and Message Center allow passwords from two to eight characters long. The DirectTalk is four characters. Either change the Password Minimum Length system variable or re-record voice segment 6219 so that the voice segment matches the system variable setting.

Stop Key

Set the value of the Stop Key parameter to # unless you plan to customize Message Center to use a different stop key. The # key is the stop key specified by the International Standard ISO/IEC 13714, whereas the supplied value for this DirectTalk parameter is *.

Number of Voice Messaging Servers

This parameter controls the number of voice messaging server processes that DirectTalk starts (from 1 to 8). Increase the value from the default of 1 to improve Message Center’s responsiveness.

installing the basic system

Number of Pool Buffers

Set the value of this parameter to at least 2000. These buffers are used by DirectTalk to manage Message Center. For more information on pool buffers see *DirectTalk for AIX: Managing and Monitoring the System*.

Maximum Cached Buffers

The default value of 300 is insufficient for you to keep Message Center's state tables in memory, improving performance. Set this parameter to at least 500 for Message Center.

For more information on system parameters see *DirectTalk for AIX: Configuring the System*.

2. Stop and restart DirectTalk so that the new parameter values take effect. Click **Operations → Quiesce Shutdown**. Wait until you see the message Node Manager terminating in the DirectTalk Status window before restarting. Restart by typing **vaeinit** at the command prompt. (The full path name is **usr/lpp/dirTalk/tools/vaeinit**.)
3. At this stage make sure that the changes on the switch described on page 5 for the Message Center and quick message numbers are complete. You also need to have changed the forwarding for your test subscriber extensions.

16. Testing Message Center

1. Dial the Message Center number. When prompted, sign on as one test subscriber and record an audio name and greeting. Repeat this process for the other test subscriber application profiles that you have created.
2. Dial the number of one of the test subscribers. Listen to the greeting and leave a message. Repeat for the other subscribers.
3. Dial the Message Center number, sign on, and listen to the messages. Send messages to other subscribers. If you have enabled transfers for subscribers (see "Implementing call transfer" on page 17), transfer the call to another number. Repeat for the other subscribers.
4. Dial the number of one of the test subscribers. Interrupt the greeting and transfer to the operator's number.
5. When all these procedures are working, you have a Message Center system that can handle messages from external and internal callers, but cannot yet exchange messages with other voice mail systems.

17. Migrating local modifications

If you are migrating from a release of IBM DirectTalkMail or from an earlier release of Message Center, it's at this point that you need to migrate your data, as well as any local modifications. You'll find the information you need in "Migrating to IBM Message Center for DirectTalk Version 6 Release 4" on page 293.

18. Loading and creating the subscriber application profiles

You are now ready to create application profiles for your subscribers. Decide how you are going to enter your subscribers' names. To use dial-by-name effectively, enter the subscriber's surname followed by their first name. For example:

SMITH PAT
SMITH JOHN

Type the names in capital letters to make searching for them more efficient.

Notes:

1. To create subscriber application profiles, we recommend that you use the `adduser` or `addlist` commands (see “Adding a new subscriber (`adduser`)” on page 50, “Adding a list of new subscribers (`addlist`)” on page 51), or “Adding a new subscriber” on page 82 rather than the DirectTalk graphical user interface.
2. If you are running either IBM DirectTalkMail for AIX Version 2 or IBM Message Center for DirectTalk Version 6.3, you cannot run the old `IVM_Admin` or `UVM_Admin` custom servers at the same time as the new one (`IMC_Admin`). We recommend that you use `IMC_Admin` wherever possible.

You might also have difficulty running other old custom servers, such as `IVM_MsgServer` and `UVM_MsgServer`. Refer to *DirectTalk for AIX: Custom Servers*; some custom servers can run on alternative socket addresses to enable them to coexist with earlier versions.
3. If you are using multiple languages, make sure that the application profiles for your Message Center subscribers are set to the correct language for each subscriber.

Migrating to a single system image

To migrate multiple Message Center systems to a single system image:

1. Use the instructions in “Installing the basic system” on page 1 to migrate all the systems to standalone Message Center Version 6 Release 4 systems.
2. Use the utilities described in “Migrating to IBM Message Center for DirectTalk Version 6 Release 4” on page 293 to move your Message Center data to the machine that will become the SSI server:
 - “Voice message ID renumbering utility” on page 296 describes **`vm_renumber`**, which ensures that each system in a single system image has a unique range of message IDs.
 - “Voice message and mailbox backup utility” on page 297 describes **`vm_backup`**, which backs up all the voice message and mailbox data on a system before you merge systems.
 - “Voice message and mailbox restore utility” on page 298 describes **`vm_restore`**, which restores all the data backed up by **`vm_backup`**.
 - “Voice message database integrity check utility” on page 299 describes **`vm_integrity`**, which identifies and optionally tries to fix any problems with the voice messaging database.

“Example of merging standalone systems into a single system image” on page 12 shows how to use the four **`vm_`** utilities to create a single system image.

3. Once you’ve merged the data from the systems onto a single machine, you can create the server as explained in *DirectTalk for AIX: Installation*.

migrating to a single system image

Note: The **saveDT** and **restoreDT** commands do not save all settings and subscriber data. Use **vm_backup** to ensure that all information is restored.

In an SSI setup the maximum number of processes allowed per user on each client should be set to at least 1600. This can be done under AIX using **smitty** → **System Environments** → **System Environments** → **Change/Show Characteristics of the Operating System**.

Example of merging standalone systems into a single system image

In this example there are two standalone systems, system A and system B, which are to be merged into a single system image (SSI) server system, system S.

1. On system A, shut down DirectTalk and execute:

```
vm_renumber
```

This renumbers the messages in system A from 1 to 3847. It reports the highest number message (3847), which the system administrator uses to decide where to start renumbering message on system B. In this case, the administrator chooses 4000.

2. On system B, shut down DirectTalk and execute:

```
vm_renumber -s4000
```

This renumbers the messages in system B from 4000 to 7398.

3. On system A, execute:

```
vm_backup -a -f vm.backup.system.A
```

This backs up everything in system A's database, including the remote systems data.

4. On system B, execute:

```
vm_backup -f vm.backup.system.B
```

This backs up everything in system B's database **except** the remote systems data.

5. On system S, shut down DirectTalk and execute the following commands:

- a. `vm_restore -r -a -f vm.backup.system.A`

This restores everything from system A's database, replacing anything that system S already had in its database. The remote systems data from system A is also imported.

- b. `vm_restore -f vm.backup.system.B`

This adds everything from system B's database, and logs several errors indicating that some Message Center profiles (such as the system profiles 999999, 999998, 999997, 333333, 444444, 555555, 666666, 777777, and 888888) already exist on system S. This is quite correct and nothing to be concerned about.

- c. `vm_integrity -f`

This fixes any problems with the merged database.

d. `vm_integrity -v -f`

This removes any old message files from system S which might have existed before system A's database overwrote system S's database.

e. `vm_renumber`

This renumbers the messages in system S from 1 to 7246 and sets the counter for the next message number to 7247.

How Message Center uses application profiles

The following application profiles, shown in Figure 2 on page 14 and Figure 3 on page 15, are required for Message Center operation and created during the import process:

- Message Center application profile
- External caller application profile
- System distribution list application profile
- External messaging application profiles
- Quick message application profile
- Broadcast application and administrator profiles
- VPIIM and e-mail application profiles
- Fax application profile
- Test subscriber application profiles

Message Center application profile

This profile specifies the phone number associated with Message Center itself. When this number is passed to Message Center as the called number, Message Center plays the sign-on prompt, rather than playing a subscriber's greeting.

If you are using direct inward dialing (DID), set the profile ID to a valid extension number on your telephone switch. If you are using an auto-attendant or operator, you can choose any valid application profile ID; make the number as short and easy-to-remember as possible. A sample application profile, with profile ID 111, is supplied.

You can create up to four application profiles for Message Center. If you have a mixed DID and auto-attendant system, you could use one for external callers and one for internal callers.

External caller application profile

This profile identifies messages left by external or unknown callers. It is unlikely that you will need to change from the supplied external caller application profile, with profile ID 999999. If you do, you must also change the value of the **External Caller ID** parameter in the Global Variable Modification section of MCIT.

how Message Center uses application profiles

System distribution list application profile

This profile holds distribution lists available for use by all subscribers on the Message Center system.

The **SystemDistID** parameter in the startup state table is set to 444444. This associates all system-wide distribution lists (those available to all subscribers) with the system distribution list profile ID. You can, if you prefer, set up a separate application profile for this purpose. If you do, you must change the value of the **SystemDistID** parameter.

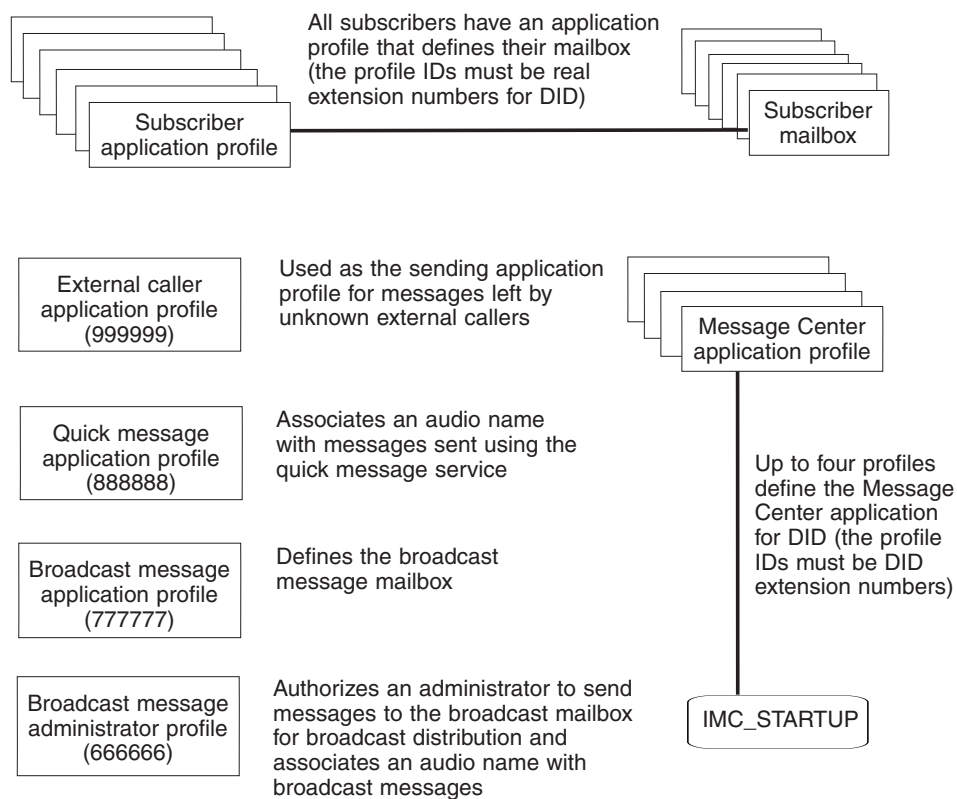


Figure 2. Use of application and administrator profiles in the basic voice messaging system

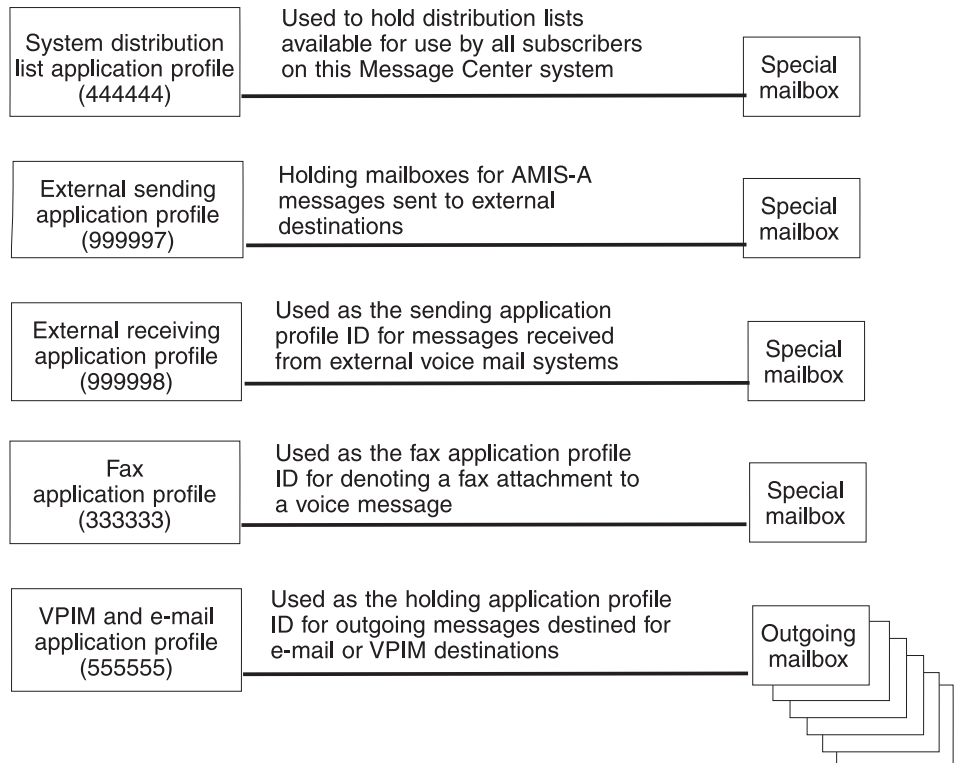


Figure 3. Use of application profiles for external messaging

Quick message application profile

This profile identifies messages sent using the quick message service. You can use the supplied quick message profile, with profile ID 888888. It is unlikely that you will need to change this. If you do, you must change the value of the **QuickMessage ID** parameter in the Global Variable Modification section of MCIT.

You must also record an audio name, for example, "the quick message service", so that the message header can say "a message sent by 'the quick message service'...".

You will also need to create a DID number for the quick message service and associate a profile ID of the same number with the quick message startup state table, IMC_START_QMG.

how Message Center uses application profiles

Broadcast application and administrator profiles

The broadcast application profile identifies the broadcast mailbox, which is the mailbox to which all broadcast messages are originally sent. The broadcast administrator profile identifies the only subscriber who can send messages to the broadcast mailbox.

You can use the supplied broadcast profile, with profile ID 777777, and the supplied administrator profile, with profile ID 666666. For more information about changing these profile IDs, see “IMC_Broadcast” on page 243.

There are a number of other broadcast profiles, with profile IDs of the form 666xxx. These are used by partition administrators to broadcast messages to subscribers belonging to a particular partition. You create these profiles using the Message Center Interface Tool (MCIT) whenever you create a partition. For more information, see page 76.

VPIM and e-mail application profiles

Application profile 555555 is used as the holding application profile ID for outgoing messages destined for e-mail or VPIM destinations. This profile ID must have ten active mailboxes. If you need more outgoing mailboxes, use more profile IDs, for example, 555551 and 555552. See “IMC_Sendmail” on page 277.

AMIS-A and DTM-D external messaging application profiles

The following supplied application profiles are used for external messaging:

999997 A profile for the sending application

999998 A profile for the receiving application

We recommend that you do not change these application profiles. If you do, you must change the value of the **AMISReceiverID** and **AMISSenderID** parameters in the Global Variable Modification section of MCIT. You need to record suitable audio names for these sending and receiving profiles.

999801 - 999810

These profiles are used for the external messaging output channels and must not be changed. They do not need audio names.

If a remote audio name cannot be played for an AMIS-A message, and no information is received to identify the subscriber, the audio name (999998) of the receiving application profile is used in the header of the incoming message heard by the subscriber. For example:

"New message number three from *receiving profile audio name*
received on the third of January at four thirty-five pm."

You could record the phrase “an external caller” as a suitable audio name.

When reviewing outgoing mail bound for AMIS-A destinations, the sender hears the audio name of the sending application profile. A phrase you might record as a suitable audio name is “an external destination”.

You can use the application profiles as supplied, or copy them, give them new profile numbers, and change them. Don't use real extension numbers for application profiles because a caller dialing a wrong number could start the application by mistake.

The default application profile ID for outgoing messages destined for e-mail and VPIM is 555555. All ten mailboxes associated with this profile ID must be active. If you need more than ten outgoing mailboxes, you can add additional profile IDs to the `$CUR_DIR/ca/IMC_Sendmail_dir/control.file`. For more information see the custom server "IMC_Sendmail" on page 277.

Fax application profile

Application profile 333333 is used to denote a fax attachment to a voice message and to forward outgoing faxes to a fax server.

Test subscriber application profiles

Create at least two test subscriber application profiles so that you can check the basic functions of the system before adding application profiles for real subscribers. Specify your startup state table in both profiles.

The profile IDs must be valid extension numbers. If you are using direct inward dialing (DID), the format **must exactly match** the format of the called number passed by the telephone switch.

Implementing call transfer

You need to implement some form of call transfer to:

- Transfer out of a greeting to the operator, the subscriber's assistant number, or to another extension
- Call the sender of a message
- Forward incoming calls to another number
- Explicitly transfer to another extension

You can provide call transfer using either the switch to which DirectTalk is connected, or DirectTalk's ability to *trombone* calls on the DTQA and DTXA trunk adapters. Tromboning calls means connecting the voice channel of an inbound call with the voice channel of an outbound call.

If you use the trombone feature, remember that, when the call is transferred and throughout the entire call, two DirectTalk channels are in use. (In a switch transfer, the single channel performing the transfer is released). This can increase the use of DirectTalk channels considerably, and you might need many more DirectTalk channels to support your Message Center installation.

Customizing the call transfer state table

Message Center uses the state table `IMC_XFER_DO` to transfer calls. By default, the supplied version of `IMC_XFER_DO` uses the TransferCall action to transfer calls.

implementing call transfer

However, it also contains the code to use the trombone feature; to enable it, you just switch the GOTO steps which go to the Transfer label to go to the Trombone label.

If you are using the capabilities of a switch to implement transfer, you might need to edit this state table with any switch-specific modifications necessary to get call transfer to work properly. For example, some switches routinely return edges (return codes) to ReconnectCall. The supplied version of IMC_XFER_DO treats these as errors. Before you start editing the state table, you must establish how DirectTalk call transfers are implemented with your switch. For more information, see “TransferCall” in *DirectTalk for AIX: State Tables, Prompts, and Voice Segments*.

You should add logic to the IMC_XFER_DO state table to prevent expensive calls being made, particularly if you are concerned about abuse of the system by hackers. You could, for example:

- Prevent all subscribers from making trunk calls.
- Check that the subscriber is in a *subscriber class* that is allowed to transfer to a public network number and, if not, skip directly to return “invalid” from IMC_XFER_DO, bypassing the TransferCall action.
- Set the maximum length of a number to which a transfer can be made to four digits, limiting call transfers to internal extensions.
- Check the class of service of the caller (allowing only internal users to use transfer) or subscriber in such variables as transfer_cos (SV427) and referral_cos (SV498). For more information, see “Appendix E. DirectTalk system variables used by Message Center” on page 283.
- Use state tables such as IMC_CHK_RFRL and IMC_CHK_REACHME to validate the numbers to which transfer is being attempted. IMC_CHK_RFRL is already used to validate subscriber entry of numbers, but if you modify it, and make illegal a number previously allowed, you need to catch numbers previously entered in IMC_XFER_DO.

Enabling call transfer functions

As supplied, functions that involve call transfer are disabled. Don’t enable these functions if your switch does not support call transfer, and you cannot, or do not want to, use the DirectTalk trombone feature.

To enable the call transfer functions, set the following parameters in the IMC_MessageCenter.ini file to no: **DisableCallSndr**, **DisableDeputy**, **DisableFax**, **DisableJumpout**, **DisableOperator**, **DisablePageMe**, **DisableReachMe**, **DisableReferral**, **DisableXfer**.

You must also customize the following state tables to allow positive validation of transfer numbers:

- IMC_CHK_DPTY
- IMC_CHK_FAX
- IMC_CHK_OPER
- IMC_CHK_PAGEME
- IMC_CHK_REACHME

- IMC_CHK_RFRL
- IMC_CHK_SCHED

Implementing AMIS-A external messaging

The Audio Messaging Interface Specification (AMIS) is a set of standards enabling different manufacturers' voice messaging systems to exchange messages. AMIS analog (AMIS-A) specifies the use of analog signals for the message, and enables Message Center to exchange messages with other manufacturers' mail systems, as long as both systems are on the same telephone network.

To set up AMIS analog messaging on your Message Center system:

1. Check that you have sending and receiving application profile IDs. (Typically these are profile numbers 999997 and 999998 as supplied with Message Center.)
2. Record suitable audio names for the sending profile (999997) and receiving profile (999998). See "AMIS-A and DTM-D external messaging application profiles" on page 16.
3. Check that these profiles are defined in the AMIS Setup window of the RSA utility within MCIT. (See "Setting up external messaging" on page 97.)
4. Add definitions for remote nodes and tell your subscribers about them. (See "Remote nodes" on page 100.)
5. If authorization is required for any of the remote nodes, add subscriber definitions for those subscribers permitted to send messages to these nodes. Authorization is used to restrict who can send messages to a node; for example, you might want to restrict the list of subscribers who can send messages to remote nodes in other countries.
6. Set up your switch for the AMIS numbers. A typical installation would be as follows:
 - Set up a DID number to be your external message receiving number. This is the number that sending systems dial to establish a connection. Set this number to hunt a number of DirectTalk channels.
 - Create a corresponding application profile on DirectTalk, specifying IMC_AMIS_D as the state table. This state table will answer all incoming calls to your external message receiving number. The size of the *hunt group* limits the number of concurrent incoming AMIS-Analog sessions.
7. Set the **Number of AMIS Output Lines** field of the RSA utility within MCIT. This is the maximum number of simultaneous outgoing calls that can be made when sending analog AMIS messages.

Implementing DTM-D external messaging

DirectTalkMail Digital (DTM-D) is a protocol enabling Message Center systems to exchange messages. It's faster and more efficient than AMIS-A, and preserves the quality of the original recording. However, you can use it to exchange messages only between Message Center systems over a LAN.

To set up DTM-D messaging on your Message Center system:

implementing DTM-D external messaging

1. Check that you have sending and receiving application profile IDs. (Typically these are profile numbers 999997 and 999998 as supplied with Message Center.)
2. Record suitable audio names for the sending profile (999997) and receiving profile (999998). See “AMIS-A and DTM-D external messaging application profiles” on page 16.
3. Check that these profiles are defined in the AMIS Setup window of the RSA utility within MCIT. (See “Setting up external messaging” on page 97.)
4. Add definitions for remote nodes and tell your subscribers about them. (See “Remote nodes” on page 100.)
5. If authorization is required for any of the remote nodes, add subscriber definitions for those subscribers permitted to send messages to these nodes. Authorization is used to restrict who can send messages to a node; for example, you might want to restrict the list of subscribers who can send messages to remote nodes in other countries.

Implementing VPIM or SMTP/MIME external messaging

This section tells you how to set up Message Center so that your subscribers can send messages to, and receive messages from, external locations. They can exchange messages with:

- Subscribers on other voice mail systems (including other Message Center systems) that support the Voice Protocol for Internet Mail (VPIM).
- Users of e-mail systems, exchanging e-mail messages with attached sound files, using the Simple Mail Transfer Protocol with Multipurpose Internet Mail Extensions (SMTP/MIME).

Your subscribers can also have their incoming voice mail redirected to their Internet e-mail address or to a different voice mail system.

Procedure

To implement VPIM or SMTP/MIME external messaging on your Message Center system:

1. For each subscriber on your system who can accept incoming SMTP/MIME e-mail or VPIM messages, add a line to the AIX /etc/aliases file to specify how the incoming mail will reach the Message Center programs that put the corresponding voice messages into the Message Center mailboxes.

How you do this depends on whether you have a standalone system or a single system image cluster:

For a standalone system

Add a line of the format:

```
6926: alias_id
```

where 6926 is the subscriber's application profile ID and `alias_id` is the name used to link profiles to the dtmailn program (see step 2). The

`alias_id` must not be a valid AIX userid because it could receive mail other than voice mail. The default `alias_id` can be used if there is no AIX userid of this name.

On a single system image cluster

Don't make the incoming mail activate the dtmailin program on the single system image server if that server has no telephony.

When a system receives a mail item, its notification system is triggered. If the system has no telephony, it won't be able to make outcalling notifications to the subscriber's notification schedules.

Instead, set up the server to forward any mail it receives (not that it should ever be sent any). The entry in the `/etc/aliases` file should look something like this:

```
6296: 6296@ssiclient.company.com
```

where `ssiclient.company.com` is the host name of the single system image client. The entry in the client system's `/etc/aliases` file would be the same as for a standalone system:

```
6926: alias_id
```

2. Add the following line, including the quotes, to the AIX `/etc/aliases` file:

```
alias_id: "| /usr/lpp/dirTalk/db/current_dir/ca/IMC_Getmail_dir/dtmailin dtuser"
```

For `dtuser` substitute the AIX userid of the DirectTalk user; for `alias_id` substitute the name used to link profiles to the dtmailin program.

3. Ensure that the AIX sendmail program on your DirectTalk system preserves the case when passing the command to the AIX shell to invoke the dtmailin program. Do this by updating the `/etc/sendmail.cf` file. This is best done by your AIX system administrator. One of the stanzas in `sendmail.c` defines the local mailer specification. For example:

```
Mprog, P=/bin/sh, F=lsDFMu, S=10, R=20, A=sh -c $u
```

The `u` parameter in the `F=` field preserves the case.

implementing VPIM or SMTP/MIME external messaging

Attention: Beware of creating *masquerade* settings in the `sendmail.cf` file. *Masquerading* is when you set something up that makes mail appear as if it's coming from another machine.

An example of inappropriate masquerading is when addresses such as:

```
umuser@machine.location.company.com  
154008@machine.location.company.com
```

get converted to:

```
umuser@company.com  
154008@company.com
```

Unless you have set up adequate *aliasing* at your company's mail gateway to convert these back to a form that identifies the correct machine, any replies sent will fail to reach their destination.

4. Ensure that AIX sendmail is configured to keep the To: header when it receives e-mail messages through SMTP/MIME. You can do this by editing the file `/etc/sendmail.cf`. The following stanza does this:

```
H?u?To: $u
```

You can confirm that this is working correctly by sending a test e-mail message to an AIX test user and examining that subscriber's mail file in `/var/spool/mail`. If it's working, the header of the message will have the To: header field.

5. After you have updated the `/etc/aliases` file with the details of new or deleted subscribers, refresh the sendmail system using the following commands (as the root user):

```
newaliases  
refresh -s sendmail
```

You must also use `refresh -s sendmail` after updating `/etc/sendmail.cf`.

Defining a remote VPIM or e-mail destination

You can define a remote VPIM or e-mail destination either by using the RSA features within MCIT (see "Remote nodes" on page 100) or by creating a local profile with a VPIM address and a **VPIM message delivery preference** of 1 or 2. Alternatively, you can use an external directory, by re-coding the addressing part of the IMC_Sendmail custom server (see "IMC_Sendmail" on page 277).

Creating a local profile for the remote destination

1. Add the subscriber. For example:

```
adduser -e 1234 -u "remote destination 1234"
```
2. Set the remote delivery address to the VPIM or e-mail address. For example:

```
changeuser -e 1234 -u vpim_address -v your_id@yourmail.com
```
3. Set the message delivery preference to remote delivery only. For example:

```
changeuser -e 1234 -u vpim_msg_del_pref -v 1
```

4. Set the remote voice type according to the remote destination:

Destination System	Remote Voice Type
Message Center	DirectTalk elements
VPIM voice mail	32KADPCM
e-mail	.wav or .au

For example:

```
changeuser -e 1234 -u vpim_voice_type -v 1
```

Using a directory external to Message Center

Establish a directory, external to Message Center, that maps the numeric destinations to the VPIM or e-mail address. For example, a subscriber could specify the destination as 7266926, which maps to `your_id@yourmail.com`, where the first three digits map to `yourmail.com`, and the last four digits map to `your_id`.

To use an external directory and return the VPIM or e-mail destination to the custom server (see “IMC_Sendmail” on page 277):

1. Modify `$CUR_DIR/ca/IMC_Sendmail_dir/get_email_addr.c`.
2. Rebuild and re-install the IMC_Sendmail custom server.
3. Modify IMC_AMIS_VN (see page 197).

Setting up remote audio names and location names

This section tells you how to set up remote audio names and a location name for an external node.

Audio names identify the sender or recipient of a message. When a subscriber *receives* a message, the message header gives the date and time when the message was left, and plays any audio name that the sender has recorded. When a subscriber *sends* a message, Message Center plays the intended recipient's audio name to confirm the recipient's identity to the sender.

Similarly, remote audio names identify senders and recipients of messages not on the local Message Center system.

You can configure remote audio names in one of three ways:

1. The way that Message Center supports the VPIM standard allows remote audio names to be packed with a VPIM message, and unpacked by the receiving mail system. This packing and unpacking happens automatically, unless you turn it off in IMC_Sendmail (see “IMC_Sendmail” on page 277).
2. To use audio names from other Message Center systems, you can copy the audio name directories of these systems in one of two ways:
 - By using cross-mounted directories on the AIX networked file system (NFS). Ask your AIX administrator to set them up for you.
 - By copying the directories using FTP.

implementing VPIM or SMTP/MIME external messaging

Message Center expects to find remote audio names in \$CUR_DIR/voice/rname/nnn/, where nnn is the code for the remote node. NFS mount, or FTP copy, the contents of the remote node's \$CUR_DIR/voice/aname directory to this directory, and your Message Center system can play those remote names.

- Record the audio names on your local system and move them to the directory where Message Center expects to find remote audio names. You can record voice segments, greetings, or audio names in the usual way, then move them to the \$CUR_DIR/voice/rname/nnn/ directory, where nnn is the code for the remote node using those audio names.

The names of files in the nnn directory take the form pppppp.mmm.ccc, where:

pppppp

is the application profile

mmm

is the mailbox (typically 001)

ccc

is the compression type (typically 002 for DirectTalk compressed voice)

For example: 154001.001.002.

You can configure remote site names in a similar way to option 3 above. Record the site name as a voice segment, greeting, or audio name, and move the recording to the \$CUR_DIR/voice/rname/nnn directory as a file called SITE.001.002.

Setting up World Wide Web access to Message Center

This section tells you how to provide your subscribers with a visual user interface to Message Center using a World Wide Web browser such as Internet Explorer.

Prerequisites

You must have access to a World Wide Web server which supports Java Servlets 2.2 or later, and Java Server Pages 1.1 or later. You must also have either Java Development Kit 1.1.8 or later, or Java Runtime Environment 1.1.8 or later. The following extensions are needed (all of which should be referenced in the \$CLASSPATH environment variable):

- Java Mail 1.2 (required jar files: imap.jar; mail.jar; mailapi.jar; pop3.jar; smtp.jar)
<http://java.sun.com/products/javamail>
- Java Activation Framework (JAF) 1.01 (required jar file: activation.jar)
<http://java.sun.com/products/javabeans/glasgow/jaf.html>
- Java Naming and Directory Interface (JNDI) 1.2.1 (required jar file: jndi.jar)
<http://java.sun.com/products/jndi/index.html>
- LDAP 1.2.2 (required jar files: jaas.jar, ldapbp.jar, ldap.jar, providerutil.jar)
<http://java.sun.com/products/jndi/index.html>

setting up World Wide Web access to Message Center

Follow the links to download JNDI and associated files - LDAP 1.2.2 is among these 'associated files'.

If your World Wide Web server is on a different system from Message Center (recommended for best performance), then the two systems must be connected by TCP/IP.

The files required to set up the Message Center Web interface are contained in:
`/usr/lpp/dirTalk/db/current_dir/Web_Interface/IMC_Web_Interface.tar`

This is located on the AIX machine on which Message Center has been installed.

Single system image considerations

If your single system image server has no telephony connections, and you want the Web interface to make outbound calls to phones to play messages, consider not configuring the Web pages to use the server as the system from which to retrieve messages. The server cannot initiate calls (if users elect to send messages to the telephone instead of having them downloaded to their browser as .WAV files). For such a single system image server, enter the host name/address of a client instead of the server in step 7 below.

Procedure

To install the Message Center interface on your Web server:

1. Ensure that the IMC_MessageCenterAPI custom server is installed on your Message Center system and that its Run status is Active. We recommend that you set the server IPL status to **AUTOEXEC**, so that every time DirectTalk is restarted the server is also restarted.
2. Copy the `IMC_Web_Interface.tar` file to your Web server machine.
3. Unpack the files to the directory in which you wish the Web application to reside; refer to this directory as `$WEBAPPS`.
4. After unpacking, you should have a `/MessageCenter` directory in the `$WEBAPPS` directory.
5. You must update your `$CLASSPATH` environment variable to include `$WEBAPPS/MessageCenter/lib/MessageCenterBeans.jar`.
6. You will need to configure your Web server to execute `index.html` in the directory `$WEBAPPS/MessageCenter/`. This directory should be set to the document root or base for this Web application on most Web servers. We recommend setting the context path for this to `/MessageCenter`. When automatic routing of users to a specific language version of the Web interface is required the `index.html` in this directory can be modified or replaced to do this.
7. You will now need to enter some configuration details into `$WEBAPPS/MessageCenter/jsps/Config.jsp` as follows:
 - Enter the host name or IP address of the Message Center system running IMC_MessageCenterAPI into the following line:
`session.setAttribute ("hostname","<enter hostname or IP address here>");`
 - Change the logging level to the required setting. Logging levels are:

setting up World Wide Web access to Message Center

- | | | |
|--|---|---|
| | 0 | No logging. |
| | 1 | Minimal logging; logs authentication requests. |
| | 2 | Medium logging; logs e-mail server information and minimal Message Center information |
| | 3 | Maximum logging; logs all requests to and from Message Center and detailed e-mail server information. |

The recommended setting for normal running is logging level 0.

- The logging level is set in the line:
`session.setAttribute("logging", "0");`
- Enter the directory path for the log file in the line (only necessary if logging is not set to 0): **String logPath** = "<enter the path to your logging directory here>";

Note: In Microsoft Windows \\ are required in paths; in AIX, only / should be used.

If you have changed the port number that IMC_MessageCenterAPI is running on by setting it in the file \$CUR_DIR/ca/ini/IMC_MessageCenter.ini (see "Appendix D. The Message Center custom servers" on page 237) then enter the new port number into the following line:

```
session.setAttribute("port", "25121");
```

8. After installing, you can access the Login page on the Web interface by using the following URLs:

English: http://??.?.?/MessageCenter/en_US
French: http://??.?.?/MessageCenter/fr_FR
German: http://??.?.?/MessageCenter/de_DE
Italian: http://??.?.?/MessageCenter/it_IT
Japanese: http://??.?.?/MessageCenter/ja_JP
Korean: http://??.?.?/MessageCenter/ko_KR

where ??.?.? is the host name of the Web server upon which you have installed the Message Center web interface and assuming the context path for the index.html file has been set to /MessageCenter.

If you want to customize the World Wide Web Message Center access form, see "World Wide Web access to Message Center" on page 47.

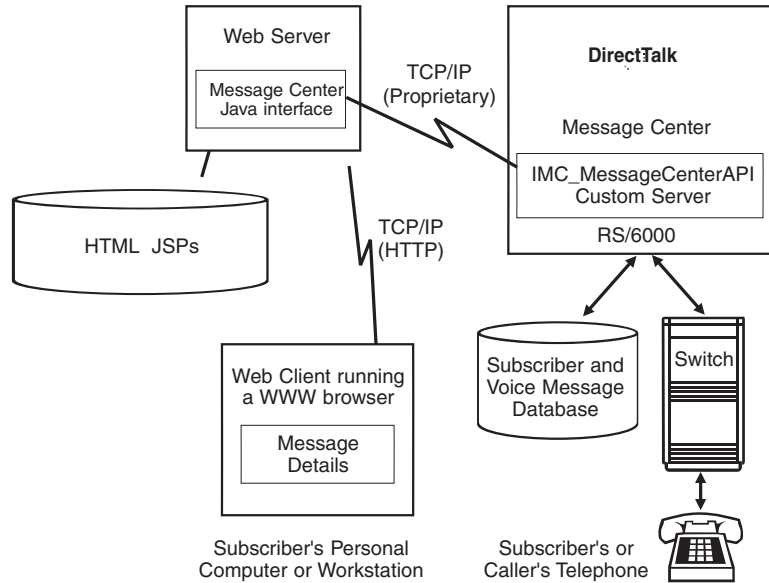


Figure 4. Using Message Center over the World Wide Web

Setting up WAP access to Message Center

This section tells you how to provide your subscribers with a visual user interface to Message Center using the WAP interface.

Prerequisites

These are the same as for the Web interface with the addition that the Web server needs to have access to a WAP Gateway via a TCP/IP connection.

Procedures

1. Assuming you have followed the install instructions for the Message Center Web interface World Wide Web access "Setting up World Wide Web access to Message Center" on page 24, the WAP files will already have been copied to the correct directory on your Web server.
2. You will now need to enter some configuration details into `$WEBAPPS/MessageCenter/wap/config.jsp` as follows:
 - Enter the host name or IP address of the Message Center system running IMC_MessageCenterAPI into the following line:

```
session.setAttribute("hostname","<enter hostname or IP address here>");
```
 - Change the logging level to the required setting. Logging levels are:

0	No logging.
1	Minimal logging; logs authentication requests.
2	Medium logging; logs e-mail server information and minimal Message Center information

setting up WAP access to Message Center

- 3 Maximum logging; logs all requests to and from Message Center and detailed e-mail server information.

The recommended setting for normal running is logging level 0.

- The logging level is set in the line:

```
session.setAttribute("logging", "0")
```

3. The following MIME types must be added within your Web server:

WML text/vnd.wap.wml

WMLC application/vnd.wap.wmlc

WMLS application/vnd.wap.wmlscript

WMLSC application/vnd.wap.wmlscript

WBMP images/vnd.wap.wbmp

4. Your Web server needs to be setup to execute the index.jsp file in the **\$WEBAPPS/MessageCenter/WAP** directory. The URL associated with this file can be something like `?.??.?/MCWAP` but should be different to the URL of the standard Web interface.
5. You also need to configure the WAP gateway. If you are using your own gateway, refer to its documentation to do this. If you are making use of an external gateway, then ask the system administrator of the gateway to configure it for you.
6. The WAP interface can then be accessed by, for example, `http://?.??.?/MCWAP`, where `?.??.?` is the host name of the Web server upon which you have installed the Message Center Web interface.

Setting up IMAP4 access to Message Center

This section tells you how to set up the environment that lets your subscribers use an industry standard IMAP4 e-mail client such as Microsoft Outlook Express to access the voice, fax, and e-mail messages in their Message Center mailbox.

Prerequisites

You must have access to a World Wide Web server running under AIX. If you are already using such a server for the Message Center Web interface, use that server.

If you are going to use RealAudio, you need a World Wide Web server to stream Message Center voice messages to IMAP4 e-mail clients that use RealAudio. You also need a RealAudio encoder, which you can obtain from RealNetworks by going to the following Web site, filling out a short survey, and downloading the RealAudio encoder, Version 3.1 for AIX.

<http://proforma.real.com/mario/tools/encoder31.html?wp=798tools>

Single system image considerations

We recommend that you run the custom server, `IMC_IMAP4_Server`, **only** on the SSI server. Although you can run it on SSI clients, running it on the server simplifies the process for subscribers when they set up their IMAP4 e-mail clients.

Procedure

1. Ensure that the following custom servers are installed on your Message Center system with an IPL status of AUTOEXEC:
 IMC_IMAP4_Server
 IMC_RA_MsgServer
2. In the custom server properties for IMC_IMAP4_Server, use the **-w** parameter to specify the fully qualified domain name of the World Wide Web server. If you are using the same AIX system for both Message Center and the World Wide Web server, set the **-w** parameter to hostname, or omit it.
3. Copy the IMC_RA_MsgClient program to the World Wide Web server from \$CUR_DIR/ca/IMC_RA_MsgServer_dir/IMC_RA_MsgClient_dir to another directory on the server. Create a script called um.ra in the cgi-bin directory to execute IMC_RA_MsgClient.
 We supply a sample script in \$CUR_DIR/ca/IMC_RA_MsgServer_dir/IMC_RA_MsgClient_dir. Change the name of the directory referred to in the sample script to the one in which IMC_RA_MsgClient resides on the World Wide Web server.
4. Add the following line to the file /etc/inetd.conf (you will need to be logged on to the AIX system as root):
 imap stream tcp nowait root /usr/sbin/imap_link imap_link
5. As root, go to the directory /usr/sbin and run the following command:
 ln -s \$CUR_DIR/ca/IMC_IMAP4_Server_dir/imap_link imap_link
6. Edit /etc/services and change imap2 to imap.
7. Run refresh -s inetd as root.
8. Uncompress and untar the RealAudio encoder files that were downloaded and place them into the \$CUR_DIR/ca/IMC_IMAP4_Server_dir/realaudio directory.
9. After starting the IMC_IMAP4_Server custom server, examine the log file \$OAM_LOG_PATH/IMC_IMAP4_Server.log for any errors. The custom server does a self-check when it starts up to ensure that all the components are in place.

Setting up Fax capability

Update Message Center configuration to specify usage of Brooktrout fax (see "Implementing a fax mailbox" on page 32). The fax_server must be set to TR114 in each mailbox that supports Brooktrout fax.

```
changeuser -e 245678 -u fax_server -v TR114
```

If you are enabling the fax functions, make sure that **DisableFax = No** is set in the [GlobalVariables] section of the IMC_MessageCenter.ini. Then, you need to ensure that you have updated the IMC_CHK_FAX state table so that valid numbers are allowed and that this state table can exit without problems.

Initialization of the Brooktrout fax server is dependent upon connection of the Brooktrout card to a DTXA digital trunk adapter, which is connected to your switch by an active telephony trunk.

setting up Fax capability

Certain files need to be installed on your system and certain Message Center settings need to be altered.

Execute the following 3 steps:

1. Type `su root`
2. Type `cd $CUR_DIR/ca/IMC_Brooktrout_dir`
3. Run the **BTsetup** shell script by typing `./BTsetup`

The console will display messages similar to the following:

```
backing up /etc/inittab to /etc/inittab.sav
Brooktrout setup is complete.
```

Modifying Brooktrout configuration parameters

The operation of the Brooktrout custom server can be modified by changing the Brooktrout parameters stored in the `IMC_MessageCenter.ini` file located in the `$CUR_DIR/ca/ini` directory. These parameters are grouped under the heading `[IMC_Brooktrout]` in the `IMC_MessageCenter.ini` file. The values are read when the Brooktrout custom server is started.

The following parameters are defined in this file:

FaxQueueLocation

This is the directory used by the Brooktrout Custom server to build the queue of Fax requests to be sent to fax machines. Default = `/usr/lpp/dirTalk/db/current_dir/oamlog`

FaxReceptionDirectory

This is the directory used by the Brooktrout Custom server to assemble Fax attachments before they are attached to new mail items. Default = `/usr/lpp/dirTalk/db/current_dir/oamlog`

LoggingLevel

Determines the amount and detail of trace information stored into the `IMC_Brooktrout.log` file in `$OAM_LOG_PATH`. This entry should only be changed under the direction of service personnel. Default = 1

FaxID Counter that is used when adding faxes to the fax Queue. It will not change when receiving a fax or when sending a One-call fax. If an item is re-queued due to an error then it will receive a new FaxID. This entry should not be changed. Default = 1

MaxProcessesToSpawn

The number of processes that are started to handle Fax requests. Default = 16

MaxQueueFaxChannels

The maximum number of channels used to transmit Fax attachments to fax machines. Default = 8

MaxTransmissionAttempts

The maximum number of attempts to transmit a fax to a fax machine before an exception record is placed into `IMC_FAX_LOG.log`. Default = 4

WaitTimeOnEmptyQueue

The time that the Queue process waits before re-reading the Queue when there are currently no items on the Queue. Default = 30 seconds

WaitTimeOnNonEmptyQueue

The time that the Queue process waits before re-reading the Queue after processing an entry. Default = 30 seconds

WaitTimeForFaxLineAvail

The time that the Custom Server will wait for a free channel before logging a failure to transmit a FAX. Default = 5 seconds

WaitTimeOnLineException

The time to wait before retrying a FAX transmission after a line exception condition has been detected. Line exceptions include busy, line problem and ring-no-answer. Default = 60 seconds

Configuring Brooktrout Fax application programming interface

IBM supplies a sample resource group file named `btfax.rg` for the Brooktrout Fax card. This should be configured, if necessary, to correspond to the number of ports in the Brooktrout Fax card(s) installed on your system. The number of ports configured in the supplied file is 16. Normally, you will not need to change the IBM-supplied configuration of the Brooktrout API. However, if the number of ports configured is more than 16, the `btfax.rg` configuration file must be changed.

Problem determination

If fax transmission stops during the receipt of a FAX check that DirectTalk System configuration of "Hangup Detection" is not set to **Constant Energy**. See the settings in "System Parameter Reference for Hangup Detection" in *DirectTalk for AIX: Configuring the System* SC33-1843.

Fax detection occurs while the subscriber's greeting is being played. To enable reliable detection of Fax input, the greeting should be at least eight seconds long.

Setting up text-to-speech engines

This section gives you some basic configuration information for each of the text-to-speech engines that Message Center supports. It does **not** replace the installation instructions that come with the products.

Lernout & Hauspie BeST Speech

This text-to-speech engine consists of a custom server called **tts_eng**. You can download this custom server from the Lernout & Hauspie Web site, but you must apply directly to the company for a valid license. The license information is passed to the custom server as command-line arguments, and must be entered in the properties dialog box of the custom server.

Fonix AcuVoice Speech Synthesizer AV2001

This text-to-speech engine comes with its own installation script. You need to select an appropriate directory in which to install the product. Having done so, edit the file `/var/dirTalk/MessageCenter/AcuVoice_TTS.ini` to indicate the location of the sound bank and dictionary files. The file looks like this:

```
[Directories]
Soundbank = /home/dtuser/AcuVoice/sndbank
DictFiles = /home/dtuser/AcuVoice/dictfls
Temp = /tmp
```

You must also confirm that you have installed the custom server `IMC_AcuVoice_TTS` and set the IPL status to `AUTOEXEC`.

IBM ViaVoice TTS

This text-to-speech engine consists of a custom server called **TTS_E**. If you want to use this engine, you need to order it separately from IBM and install it.

Implementing a fax mailbox

This section tells you how to set up Message Center to handle faxes in subscribers' voice message mailboxes.

Start by enabling fax processing by setting the **DisableFax** variable to **no** in the `GlobalVariables` section of the file `IMC_MessageCenter.ini`. With fax enabled, when Message Center detects incoming fax tones, it reacts in one of the following ways, depending on your system environment:

- If the profile receiving the call (the called number) has a fax number defined, Message Center transfers the call to that fax machine or fax server.
A fax number can be defined for a profile either by the subscriber (in the voice menus) or by the system administrator (using the `changeuser` command; see "Fax number" on page 59).
- If you have installed the Brooktrout fax solution, Message Center attaches the fax to a voice message, beginning with the words "This message is a fax". The recipient can manipulate this voice message with its fax attachment in all the usual ways (save, delete, forward, and so on), as well as sending it to a fax machine using the Brooktrout fax card.

To set this up for each receiving profile on a system with the Brooktrout fax, use the `changeuser` command to set the fax server to `TR114` (see "Fax server" on page 59).

You can also integrate Message Center with fax servers other than the Brooktrout fax, in any of the following ways:

- When transferring to a fax server, Message Center can indicate which number was being called, by dialing the number in dual-tone multifrequency (DTMF) tones. Fax modems that support DTMF routing can detect these tones and forward the addressing information to the fax server.

- If you have another manufacturer's fax server that can send faxes as TIFF files in VPIM or SMTP/MIME format, faxes can be forwarded as VPIM or SMTP/MIME mail items to the Message Center mailbox to which they were addressed. Message Center then attaches the fax to a voice message, starting with "This message is a fax".
- If a subscriber has set up a fax server, other than the Brooktrout fax server, and chooses to send the fax to a fax machine, Message Center sends the fax to the server as an SMTP/MIME mail item. It also sends the fax machine number as the name of the intended fax machine.
For example, if a subscriber has a fax server defined as fax_fx@site.company.com, and sends a fax to 01962818933, Message Center sends the fax with the addressing information To: "01962818933" <fax_fx@site.company.com>.

Implementing SMTP mail server support

This section tells you how to set up SMTP server support in Message Center. The Message Center web interface allows certain subscriber types to send e-mail. To be able to do this, they need access to an SMTP server. A system-wide SMTP server is used.

To set up and configure SMTP support:

- Configure the system-wide SMTP server by setting the SMTP_Server variable in the section XXX_MessageCenterAPI of the file IMC_MessageCenter.ini to the fully qualified domain name of the SMTP server.

Implementing LDAP server support

This section tells you how to set up LDAP server support in Message Center.

Message Center allows subscribers to query LDAP servers when attempting to find the e-mail address of people they wish to filter e-mail messages from, or when sending messages.

There is a system-wide LDAP server that is used, but subscribers can also have a separate corporate LDAP server. The Corporate LDAP Server, is the name given to a user-defined LDAP server that subscribers can specify. If the subscriber does not define a corporate LDAP server, then the system-wide server is used for such things as filtering. If the subscriber does define a corporate LDAP server, then that one is used instead of the system-wide server. The primary use for this alternate LDAP server is for situations where there are multiple companies using one Message Center box, for example, in a 'telco' environment or when partitioning is used.

The following steps should be followed when setting up and configuring LDAP server support:

- Configure the system-wide LDAP server. This is done by setting the **SystemDefaultServer** variable in the section LDAP_Server of the file IMC_MessageCenter.ini to the fully qualified domain name of the server. The following is taken from the IMC_MessageCenter.ini file.

implementing LDAP server support

```
[LDAP_Server]
SystemDefaultServer = ldapserver.ibm.com
```

- Create an ini file for each LDAP server that users will possibly wish to access, including the system-default LDAP server. The ini files are placed in the directory \$CUR_DIR/ca/ini and have a name that consists of the fully qualified domain name of the LDAP server with .ini appended, for example, if the LDAP server name is **ldapserver.ibm.com**, the ini file name will be ldapserver.ibm.com.ini.

The .ini file contains configuration information specific to the particular LDAP server. This information consists essentially of a mapping between Message Center and the LDAP server such as **MessageCenterFieldName = LDAPServerFieldName**. These field names can differ, to a greater or lesser extent, between various types of LDAP server for example, Lotus Domino, Microsoft Exchange, OpenLDAP. Each LDAP server will require its own specific configuration information. These field names are defined in the LDAP-server's schema. This information is used by Message Center so that it will know what fields must be searched when doing queries. A sample .ini file called ldapserver.ibm.com.ini is provided in the directory \$CUR_DIR/ca/ini. Here are the contents of the sample file and a description of each of the variables:

```
[Server]
Base =o=MessageCenter
UseSSL = no

[Login]
SysAdminLoginID = administrator
SysAdminPassWD = 17d442f303873c46

[Fields]
NameField = CN
DistinguishedNameField = dn
DigitNameField = mobile
EmployeeNumberField = employeeid
DepartmentField = department
PhoneNumberField = phonenumber
TielineField = tieline
FAXNumberField = facsimileTelephoneNumber
TransferNumberField = callforwardingnumber
EmailAddressField = mail

LoginField = employeeid
PinField = mobile
EmailServerTypeField = mailsystem
EmailServerField = mailserver
EmailAccountIdField = shortname
EmailPasswordField = userpassword
EmailAddressField = mail
```

Base The base for the LDAP server. This is site and location specific, for example

```
o=IBM
c=US
```

UseSSL

This is for future use and is ignored for now.

SysAdminLoginID

In order for Message Center to fully utilize the LDAP server, it must have system administrator privileges. This variable contains the name of a user with system administrative privileges. This should be the distinguished name of the user. ***This field is mandatory.***

SysAdminPassWD

This field contains the encrypted password. This should not be edited manually. The 'pwdutil' utility should be used and is located in the directory \$CUR_DIR/ca/IMC_LDAP_Client_dir/utils. Its syntax is as follows:

```
[Command Line]>pwdutil inifile section key value.
```

For example:

```
[Command Line]>pwdutil messagecenter.ibm.com.ini Login SysAdminPassWD password.
```

Once this command has been run, the LDAP server's Administrator password will appear in the .ini file in an encrypted form. ***This field is mandatory.***

NameField

This is the field containing the full name of the person. This would typically be **cn** for the canonical name.

DistinguishedNameField

This is the name of the field containing the distinguished name. This would usually be **dn** for distinguished name.

Note: An LDAP server administrator is free to configure each of the following Message Center field names. These LDAP server field names will be drawn from the LDAP server's schema.

DigitNameField

This is the name of the field that contains the digitname spelling of the person's name. If this field is empty or not set, then searches based on digitnames cannot be done.

EmployeeNumberField

This is the name of the field containing the employee number of the person.

DepartmentField

This is the name of the field containing the department name or ID of the person.

PhoneNumberField

This is the name of the field containing the telephone number for the person.

TielineField

This is the name of the field containing the tieline phone number for the employee if one exists

FAXNumberField

This is the name of the field that contains the fax number for the person. This isn't currently being used and is for information purposes only.

implementing LDAP server support

TransferNumberField

This is the name of the field that contains a telephone number to which subscriber would like their calls transferred. This isn't currently being used and is only for information purposes

EmailAddressField

This is the name of the field containing the e-mail address of the person.

Implementing a telephony portal

This section tells you how to setup Message Center as a telephony portal.

When Message Center is configured as a telephony portal, it isn't necessary to create and administer subscriber mailboxes on the DirectTalk for AIX system. Instead, the necessary subscriber information is extracted from an LDAP server. Subscribers that are configured as telephony portal users have a limited amount of functionality. The following features are the only ones available to them:

- Receive voice messages as .WAV attachments in their e-mail
- Retrieve voice and e-mail messages. E-mail messages are played back using TTS
- Reply to messages
- Forward messages
- Delete messages
- Mark messages as read
- Change their password.

The following steps should be taken to enable and configure the telephony portal:

- Enable the feature by setting the **Active** variable in the telephony portal section of the file IMC_MessageCenter.ini to **yes**. Message Center is shipped with the telephony portal disabled.
- Set up an access number for subscribers to dial when they wish to log in and check their messages. This number must be different to the **VMailExtension** and the alternate extensions. This is configured by setting the **TelephonyPortalExt** variable in the GlobalVariables section of the file IMC_MessageCenter.ini.

Note: Unlike the **VMailExtension** number, the **TelephonyPortalExt** does not have a corresponding Message Center Application Profile. DirectTalk's default application profile (000000000) must exist in the Message Center AIX system for the telephony portal to work.

- Ensure that a system-wide LDAP server is configured. The variable **SystemDefaultServer** in the section LDAP_Server of the file IMC_MessageCenter.ini must be set to the fully qualified domain name of the server.
- Configure the Fields section of the .ini file for the system-wide LDAP server. Here is the relevant section and a description of each of the required fields:

```
[Fields]
LoginField =telephonyPortalLoginId
PinField =telephonyPortalPin
EmailServerTypeField =emailServerType
```

```
EmailServerField =emailservername
EmailAccountIdField =emailAccountId
EmailPasswordField =emailPassword
EmailAddressField =mail
```

For best performance, these fields must be explicitly added to the LDAP-server's schema.

LoginField

This is the name of the LDAP field that will be used by Message Center when authenticating users. The will typically be the telephone number of the subscriber.

PinField

This is the name of the field containing the password the subscriber will use when logging in. This field will be encrypted, and must be set using the `set_user` command, found in the directory `$CUR_DIR/ca/IMC_LDAP_Client_dir/utlis`. See 38

EmailServerTypeField

This is the name of the field that contains a flag indicating the type of e-mail server the user is using, whether it is IMAP4-compliant or POP3-compliant.

EmailServerField

This is the name of the field that has the fully qualified domain name of the e-mail server the users will be using as their message store.

EmailAccountIdField

This is the name of the field that contains the login ID for the e-mail account.

EmailPasswordField

This is the name of the field that contains the password for the subscriber's e-mail account. This field will be encrypted

EmailAddressField

This is the name of the field that contains the e-mail address of the subscriber

Ensure that the telephony portal subscribers are set up correctly. These subscribers must exist in the LDAP server and certain fields must be configured for each user. The telephony portal requires the following information for each subscriber in order to function properly:

- The e-mail address.
- The telephone number or extension the users will use to identify themselves to Message Center.
- The password each user will use when logging in via the telephony portal.
- The type of e-mail server (POP3 or IMAP4).
- The address of the e-mail server.
- The login ID for the e-mail account on the e-mail server.
- The password for the e-mail account.

implementing a telephony portal

This information can be set by using the command line utilities in the directory `$CUR_DIR/ca/IMC_LDAP_Client_dir/utls`, as follows:

set_user

sets up a user's telephony portal password, encrypts it and stores the encrypted data on the LDAP server. When required, Message Center accesses this encrypted field and decrypts it itself. Therefore, **set_user** must be used to set all telephony portal users' passwords. The telephony portal cannot use unencrypted fields or data for a user's password. The syntax for **set_user** can be displayed by entering the **set_user** command on it own and pressing **Enter**.

get_user

retrieves a telephony portal user's details from the LDAP server, and prints them out as a list. The syntax for **set_user** can be displayed by entering the **set_user** command on it own and pressing **Enter**

get_dn retrieves the distinguished name of a user from the LDAP server. It is usually used to facilitate the **get_user** command. The results of this command will be displayed in the format of `CN=xxx, O=xxxx`. The syntax for **get_dn** is displayed by entering the **get_dn** command on its own only and pressing **Enter**.

Chapter 2. Customizing Message Center

You might want to customize Message Center to suit company policy, to make it work with your telephone switch, or to make it easier for subscribers who have been using another voice mail system. You can customize many things, including:

- “Standard subscriber menu key assignments”
- “Subscriber type menu key assignments” on page 40
- “Prompts and help” on page 40
- “First time users” on page 42
- “Sign-on methods” on page 42
- “Security” on page 42
- “Confidential e-mail messages” on page 44
- “Sending messages” on page 43
- “Variable silence before prompts” on page 44
- “Avoiding messages being left unintentionally” on page 44
- “Listening to messages” on page 44
- “Statistics and accounting data” on page 45
- “Call handling” on page 45
- “Letters associated with telephone keys” on page 45
- “Message Center state tables” on page 46
- “Message Center custom servers” on page 47
- “World Wide Web access to Message Center” on page 47
- “Dynamic caller options” on page 48

Standard subscriber menu key assignments

All supplied menus for Standard subscribers are consistent with International Standard ISO/IEC 13714. This standard has been developed with the leading suppliers and users of voice processing systems, and aims to provide a consistent interface for callers and subscribers across the world. So you should think carefully before adopting different key assignments. However, you can assign:

- Any function to any menu
- Any DTMF key to any function on any menu

Replace the IMC_SBR_MENU state table for subscriber menus or the IMC_CLR_SMEN state table for caller menus. If you change the default name of MenuStateTable from IMC_SBR_MENU, you must also rename the following state tables (limit the name to a maximum of 12 characters and use the same three-character suffixes as below):

IMC_SBR_MENU_EM
IMC_SBR_MENU_MP

Standard subscriber menu key assignments

IMC_SBR_MENU_CH
IMC_SBR_MENU_NS
IMC_SBR_MENU_NB

Set the following parameters in the Global Variable Modification section in MCIT:

CmenStateTable
MenuStateTable

If you want to change the keys for functions available while a message is playing, you must also reset the following parameters in the Global Variable Modification section in MCIT:

BackKey
ByNameKey
FastKey
ForwardKey
LoudKey
PauseKey
QuietKey
SlowKey

Subscriber type menu key assignments

In addition to the Standard subscriber interface, Message Center provides four alternative subscriber interfaces that either add additional function to the standard interface, or remove function to provide a simpler subscriber interface. The alternative interfaces and the state tables used to implement them are:

Table 2. Subscriber types and state tables

Subscriber Type	Subscriber State Table	Caller State Table
Business - local & remote	IMC_SBR_MENU_01	IMC_CLR_SMEN_01
Business - local	IMC_SBR_MENU_02	IMC_CLR_SMEN_02
Residential	IMC_SBR_MENU_03	IMC_SBR_MENU_03
Remote e-mail only	IMC_SBR_MENU_04	IMC_CLR_SMEN_04

You can use different sets of menu key assignments by changing the appropriate state table listed above.

Prompts and help

If the wording, voice, or language does not match your requirements, you can re-record the prompts. Subscribers and callers can select a language from the control menu. For a list of the languages supported by Message Center and details of how to install the language package see “5. Installing the National Language Support (NLS) options” on page 3.

You can customize the help that is available on all menus, and you can assign any single key to access it from each menu (if the ISO-consistent key 0 is unacceptable).

Recording new voice segments

If you plan to replace the voice segments, first make draft recordings using a simple telephone-based application such as IMC_RECORDCOMP2. Then test the system fully until you are satisfied with the wording. If the voice quality is adequate, you need do no more, but if you want high-quality voice recordings, you can re-record your voice segments in a professional recording studio, and import them using the DirectTalk batch voice import. For information on batch voice import, see *DirectTalk for AIX: State Tables, Prompts, and Voice Segments*.

Translating the prompts and help

Message Center is shipped with US English as the default language. The US English voice segments are located in the voice directory IMC. For a complete list of voice segments supplied with Message Center, see “Appendix B. Message Center voice segments” on page 115. We also supply voice prompts in the following languages:

- French
- German
- Italian
- Japanese
- Korean
- UK English
- US English

To implement Message Center in a language other than those supplied, set the application profile for the IMC_RECORDCOMP2 application (see 218) to the new language before re-recording all the Message Center voice segments translated into the new language.

You might need to translate the prompts that control the way that the message header is spoken in Message Center, so that they are compatible with the way dates and times are spoken in the new language. Test the application carefully in the new language to make sure that the translation has captured the original meaning of the prompts.

See *DirectTalk for AIX: Configuring the System* for information about using languages other than US English. See *DirectTalk for AIX: State Tables, Prompts, and Voice Segments* for information about recording voice segments and translating prompts into other languages. You will also need “Appendix A. The Message Center menus” on page 105 in this book.

Dynamic language change

For details on how to implement dynamic language change by subscribers and callers, see “IMC_LANG” on page 208.

First time users

You can choose whether first time users are to be guided through the process of changing the password, recording an audio name, and recording a greeting, followed by an optional tutorial.

If you want to provide a tutorial, record it in voice segments 6379 and 6380. These are optionally played at the end of IMC_FIRSTTIME for standard subscribers.

Set the FirstTimeUsage option in the start up state table in the Global Variable Modification section in MCIT

Adapting state tables for first time users

Each of the four alternative subscriber interfaces has its own state table for first time users. You can edit these state tables to provide your own tutorial. The state tables for each of the subscriber types are listed in the following table:

Table 3. Subscriber type state tables

Subscriber Type	State Table
Business - local & remote	IMC_FIRSTTIME_01
Business - local	IMC_FIRSTTIME_02
Residential	IMC_FIRSTTIME_03
Remote e-mail only	IMC_FIRSTTIME_04

Sign-on methods

You can choose one of the following methods for subscriber sign-on:

- Prompt for mailbox number and password.
- Use the mailbox number passed from another application and prompt for the password only.
- Use the mailbox number passed from another application that has already done its own authorization and do not prompt for password. If the switch supports logging-on to the telephone with a security code, subscribers can access their mail without further entry of mailbox or password.

Set the **MCMMainControl** variable in the GlobalVariables section of the file \$CUR_DIR/ca/ini/IMC_MessageCenter.ini.

Security

To guard against unauthorized access to mailboxes, you can specify:

- The minimum number of days that must pass before a password can be reused.
- A maximum number of invalid password attempts for each mailbox. If this number is exceeded, the call is dropped.

- A cumulative maximum number of invalid password attempts for each mailbox, after which the mailbox is locked until unlocked by the system administrator.
- A cumulative maximum number of invalid password attempts over the whole system, after which all system access is locked.
- The maximum number of days after which subscribers will be forced to change their passwords.
- Checking the password, using the IMC_CHK_PASWD state table, to ensure that it meets location standards.

Set the following variables in the GlobalVariables section of the file IMC_MessageCenter.ini:

GlobalPWLimit
MaxPWAttempts
ProfilePWLimit
PwdExpiryDays

Note: The value of ProfilePWLimit must be less than the value of MaxPWAttempts.

Table 4. Default values

Variable	Default	Notes
GlobalPWLimit	0	Message Center would never become locked due to too many system-wide, failed login attempts
MaxPWAttempt	3	Message Center would hangup the phone after three consecutive failed login attempts.
ProfilePWLimit	0	A subscriber's mailbox would never become locked due to too many failed login attempts.
PwdExpiryDays	30	The default setting would force all subscribers to change their password every 30 days.

The number of days that must pass before a password can be reused is determined by the variable **MinTimeReuse** in the Passwords section of the file IMC_MessageCenter.ini. The default is 180 days. Here is the relevant section from the file:

```
[Passwords]
MinTimeReuse = 180
```

Sending messages

You can specify the key that indicates that the subscriber is going to enter the destination for a message as a name rather than a number. The supplied value is the # key.

You can specify that distribution list IDs can be assumed to be unique, that is, they can't be confused with other destination IDs such as extension numbers.

sending messages

Set the following variables in the GlobalVariables section of the file IMC_MessageCenter.ini:

ByNameKey
UniqueDlists

Confidential e-mail messages

As a security measure, you may want to restrict access to confidential e-mail messages by subscribers over the telephone. Message Center can be configured to identify confidential messages based on text within the e-mail subject. If a message has been identified as confidential and access to confidential messages is restricted, then the user will not be able to retrieve the messages.

The access to confidential messages is configured via the **Confidential Email** section in the file IMC_MessageCenter.ini. Here is the relevant section:

```
[Confidential Email]
SubjectText = IBM Confidential
TelephoneAccess = yes
```

SubjectText - This is the text to look for in an e-mail subject in order to identify it as being a confidential messages. If your company doesn't have a specific string of text that appears in all confidential e-mail subjects, then this feature cannot be used.

TelephoneAccess - This enables or disables access to confidential e-mail messages via the TUI. When set to **yes**, confidential e-mail messages can be retrieved.

Variable silence before prompts

Some switches suppress sound for a short time after a key has been pressed. This might result in prompts that seem to start abruptly, or where the beginning might not be heard. You can set the length of time you want Message Center to wait before prompts are played. Voice segment 9010 is used for this delay; it is supplied as a pause of 200ms.

Avoiding messages being left unintentionally

Sometimes callers unintentionally leave short, empty messages when they hang up after the tone. You can specify the minimum length of a message that will be saved when a caller finishes by hanging up. An initial value of 2000ms is suggested to start with, but experiment with different settings to establish the best for your system and organization.

Set the MinMessageTime variable in the GlobalVariables section of the file IMC_MessageCenter.ini.

Listening to messages

As supplied, you can speed up, slow down, and change the volume of messages.

You can specify the time intervals for skipping backwards and forwards while playing back messages.

Set the following variables in the GlobalVariables section of the file IMC_MessageCenter.ini:

BackTime
FwdTime
SimplePlay

Statistics and accounting data

You can write programs to process the comprehensive statistical data created by Message Center in the file \$OAM_LOG_PATH/IMC_Stats.log.

Call handling

You need to add logic to the following state tables if you want to enable and control call transfer and outward dialing notification:

IMC_CHK_DPTY
IMC_CHK_FAX
IMC_CHK_OPERATOR
IMC_CHK_PAGEME
IMC_CHK_REACHME
IMC_CHK_RFRL
IMC_CHK_SCHED

Letters associated with telephone keys

You can reassign letters to different telephone keys. You might want to do this if the letters on your telephone keys are different from the DirectTalk default key assignments, or if you want to use the ISO/IEC 995-8: 1994 standard key assignments. These letters are used when you send a message by keying the addressee's name instead of the extension number. These assignments are shown below:

letters associated with telephone keys

1 QZ	2 ABC	3 DEF	1	2 ABC	3 DEF
4 GHI	5 JKL	6 MNO	4 GHI	5 JKL	6 MNO
7 PRS	8 TUV	9 WXY	7 PQRS	8 TUV	9 WXYZ
*	0	#	*	0	#
DirectTalk Key Assignments			ISO/IEC Key Assignments		

Figure 5. DirectTalk and ISO/IEC key assignments

To change the letters assigned to telephone keys, see the *Key Signals* parameter in *DirectTalk for AIX: Configuring the System*.

Message Center state tables

The `/usr/lpp/dirTalk/sw/MessageCenter/st_src` directory contains the source code of the customizable Message Center state tables. If you decide to customize a Message Center state table, copy the source file to another directory and make your changes to the copy. Leave the original files in the `st_src` directory; these files might be overwritten if you apply fixes to Message Center.

Editing Message Center state tables

When you customize a state table, you can either use the DirectTalk state table editor, or you can update the ASCII source code supplied in `/usr/lpp/dirTalk/sw/MessageCenter/st_src`, and import the updated source into DirectTalk using the state table editor or the DTst utility (see *DirectTalk for AIX: State Tables, Prompts, and Voice Segments* for details). We recommend that you use this second method, and maintain the ASCII source code as the master copy of the application.

The names of the ASCII source files are the same as the state table names, but without the prefix `IMC_`, and in lowercase. For example, the source for the `IMC_STARTUP` state table is held in the file `startup`. For a complete list of all Message Center state tables and their source file names, see Table 13 on page 189.

For more information on state tables and how to edit them, see *DirectTalk for AIX: State Tables, Prompts, and Voice Segments*.

Message Center custom servers

You can customize some of the Message Center custom servers by:

- Changing information in IMCdefaults.file. This file is in the /var/dirTalk/MessageCenter directory.
- Changing information in the configuration file IMC_MessageCenter.ini. This file is in the directory \$CUR_DIR/ca/ini.
- Removing calls to the custom server from state tables.
- Using command line parameters.
- Changing the source file (where supplied) for the custom server. If you decide to change a Message Center custom server, make a copy of it and work on the copy.

To create a new, or modify an existing, custom server, you must be familiar with programming logic and C language programming. You also need to understand how a custom server interacts with host and voice applications. See *DirectTalk for AIX: State Tables, Prompts, and Voice Segments* for more information.

See “Appendix D. The Message Center custom servers” on page 237 for details of the Message Center custom servers, including those you can customize.

World Wide Web access to Message Center

The Message Center web interface is implemented as a hierarchy of forms. These are contained in the IMC_Web_Interface.tar, and were extracted to your web server (see “Setting up World Wide Web access to Message Center” on page 24). The top-most form is called index.html. It is an HTML document and is the logon form. Most other forms are Java Server Pages (JSP). These differ from HTML in that, when accessed from a browser, they are first compiled into servlets by the Web server. These servlets collect the data required, via the Message Center Java interface, and then deliver the required HTML to the requesting browser. JSPs are used in this way to generate dynamic Web pages. The Java provide an interface into Message Center, and can be used to write data to Message Center as well as reading data from it.

You can modify the web interface in the following number of ways:

- Changing the appearance of any of the HTML and JSP pages by altering the graphics, form-field dimensions, logo and text that are not within JSP tags. Be careful with any changes you make to these pages, as they have been formatted with tables and images of specific dimensions. Test your changes with a web browser.
- Replace the whole interface with your own, making use of the Java interface to Message Center.
- Specify a different host name (or IP address) and port number of the IMC_MessageCenterAPI custom server for TCP/IP communications between the Web interface and the custom server. This procedure is detailed in “Setting up World Wide Web access to Message Center” on page 24

Remember that you will need to copy your modified files from \$CUR_DIR/web_dir to the location where your web server expects to find them.

Dynamic caller options

Message Center lets Business - local and Business - local & remote subscribers provide different options to callers depending on the greeting that the subscriber has active. The table below describes the default features that are available for each greeting type.

Table 5. Dynamic caller options

Greeting	Pager	ReachMe	Deputy	Transfer
Available and working at the office	Yes	No	Yes	Yes
Available, but working away from the office	Yes	Yes	Yes	Yes
Unavailable but accepting messages	No	No	Yes	Yes
Unavailable and not accepting messages	No	No	Yes	Yes
Left for the day	No	No	Yes	Yes
On the phone	Yes	No	Yes	Yes

You can change each of these settings, across the whole Message Center system, by editing the ASCII file /var/dirTalk/MessageCenter/Greetings.ini.

This file contains a section for each greeting. Here, as an example, is the default section for the *Available and working at the office* greeting:

```
#
# Available and working at the office
#
[1]
pager = yes
followme = no
backup = yes
transfer = yes
```

The section heading is the greeting ID for the particular named greetings. The greeting ID for each of the named greetings is listed in Table 6:

Table 6. Greeting IDs

Greeting	ID
Available and working at the office	1
Available, but working away from the office	2
Unavailable but accepting messages	3
Unavailable and not accepting messages	7
Left for the day	4
On the phone	6

After editing this configuration file, stop and restart the custom server IMC_Greetings to make the changes active.

Chapter 3. Subscriber administration

This chapter describes how to carry out day-to-day administration of a Message Center system. In all cases, we recommend that you use the Message Center commands described here. Although you can do some of the tasks here using the DirectTalk windows, you'll find it quicker to use the commands.

The following topics are covered in this chapter:

- “The Message Center line command utilities”
- “Adding a new subscriber (adduser)” on page 50
- “Adding a list of new subscribers (addlist)” on page 51
- “Deleting a subscriber (deluser)” on page 52
- “Deleting a list of subscribers (dellist)” on page 53
- “Displaying details of a subscriber (showuser)” on page 53
- “Changing details of a subscriber (changeuser)” on page 54
- “Searching for a subscriber (finduser)” on page 64
- “Unlocking a mailbox (changeuser)” on page 64
- “Unlocking the system (changeuser)” on page 65
- “Moving an application profile to a new system (moveprofile)” on page 65
- “Listing all the subscribers (listuser)” on page 67
- “Handling Message Center statistics (FormatStats)” on page 68
- “Sending a broadcast message” on page 68
- “Creating subscriber or caller banner messages” on page 69
- “Creating distribution lists” on page 69
- “Backing up your Message Center system” on page 70

The Message Center line command utilities

The Message Center line command utilities can be run by any authorized administrator logged on to the RS/6000 on which Message Center is installed. Use AIX file system security processes to prevent unauthorized access to the utilities.

Note: Any name string in a command containing an apostrophe as a single quote (such as O'Reilly) must be enclosed in double quotation marks. For example, to avoid parsing by the AIX shell when using the adduser command, type:

```
"O'Reilly"      or:      O""Reilly
```

The addlist command parses the names within the administration utility, so no special treatment is required. (For more on the administration utility, see “IMC_Admin” on page 240.)

The following is a list of the Message Center line commands and the page numbers where you can find them. All the commands are in the

line command utilities

\$CUR_DIR/ca/IMC_Admin_dir/utls directory, with the exception of FormatStats and moveprofile, which have their own directories as described in the sections referred to below.

- “Adding a new subscriber (adduser)”
- “Adding a list of new subscribers (addlist)” on page 51
- “Changing details of a subscriber (changeuser)” on page 54
- “Deleting a list of subscribers (dellist)” on page 53
- “Deleting a subscriber (deluser)” on page 52
- “Searching for a subscriber (finduser)” on page 64
- “Handling Message Center statistics (FormatStats)” on page 68
- “Listing all the subscribers (listuser)” on page 67
- “Moving an application profile to a new system (moveprofile)” on page 65
- “Displaying details of a subscriber (showuser)” on page 53

The syntax of the line commands in this chapter gives the command name and parameters in **bold**, with the associated variable names shown in *italics*. Optional parameters are shown in [square brackets]. For example:

adduser

-e *Extension Number*

-u *Subscriber Name*

[**-m** *Number of Mailboxes*]

[**-p** *Password*]

The examples show the command and parameter names in bold, with the variables in ordinary text. For example:

adduser -e 1234 -u myprofile

Adding a new subscriber (adduser)

The adduser command creates a single DirectTalk application profile. A minimum of two parameters, the extension number (profile ID) and subscriber name, are required. The other parameters are taken from /var/dirTalk/MessageCenter/IMCdefaults.file.

Note: In the defaults file, you can change any mailbox parameter listed under the changeuser command. Adduser makes these changes automatically after adding the profile. For example, you could add the following lines to /var/dirTalk/MessageCenter/IMCdefaults.file:

```
mailbox_active_grt=1;
fax_server=TR114;
delete_new_msgs=1;
autosave_new_msgs=1;
```

This applies only to mailbox parameters, not to application profile or notification schedule parameters. (See Table 7 on page 55 for a list of mailbox parameters.)

From the AIX command line:

adduser

-e *Extension Number*
-u *Subscriber Name*
[-stn *State Table Name*
-ste *State Table Entry Point*
[-m *Number of Mailboxes*
-sc *Subscriber Class*
-st *Subscriber Type*
[-l *Language Code*
-p *Password*

Note: Parameters **-e** and **-u** are mandatory. Parameters **-stn** and **-ste** must be used together.

To use dial-by-name effectively, enter the subscriber's surname followed by their first name. Make sure that names are typed in a consistent way (for example, in capital letters, last name, first name), to make sorting and searching for them more efficient. For example:

SMITH PAT
 SMITH JOHN

Example:

adduser -e 1234 **-u** myprofile

Adding a list of new subscribers (addlist)

The addlist command creates a single DirectTalk application profile for each entry in a list. The name of the list is passed to this command preprocessor as the only parameter. The format of the list file entry is:

EEEE:UUU UUU:PPPP:

where:

EEEE is the extension number

UUU UUU
 is the subscriber name and details

PPPP is the voice mailbox password

For example:

1234:JOSEPH GREEN:4224:

Note: Make sure you include the “.” at the end of each parameter. Although you can create this list file manually, it is usually created by a report converter

adding a list of new subscribers (addlist)

program. The input to the converter program is a report from the attached switch, automated operator, or electronic telephone directory. Some switches give you a list of extension numbers in a file that you can use as the basis for creating an input file for addlist

Note: In the defaults file, you can change any mailbox parameter listed under the changeuser command. Addlist makes these changes automatically after adding the profile. For example, you could add the following lines to /var/dirTalk/MessageCenter/IMCdefaults.file:

```
mailbox_active_grt=1;
fax_server=TR114;
delete_new_msgs=1;
autosave_new_msgs=1;
```

This applies only to mailbox parameters, not to application profile or notification schedule parameters. (See Table 7 on page 55 for a list of mailbox parameters.)

From the AIX command line:

addlist -f *FileName.List*

Note: *FileName.List* must include the full path if the file is not in the current directory. The filename is unrestricted, but is easier to identify if the extension is *.list*.

Example:

addlist -f /my/directory/is/here/file_to_use.list

or (to use the current directory):

addlist -f file_to_use.list

Deleting a subscriber (deluser)

Use the deluser command to delete a single DirectTalk application profile. The command has one mandatory parameter, the extension number, and one optional parameter, the subscriber's name. The optional parameter can be used to provide a check that the profile to be deleted is the correct one.

Note: This parameter must exactly match the name in the profile or the command will fail.

From the AIX command line:

deluser -e *Extension Number*
[**-u** *Subscriber's Name*]

Example:

deluser -e 1234

Deleting a list of subscribers (dellist)

Use the dellist command to delete a single DirectTalk application profile for each entry in a list. The name of the list is passed to this command preprocessor as the only parameter. The format of the list file entry is:

EEEE:

where EEEE is the extension number.

Although you can create this list manually, it is usually created by a report converter program. The input to this converter program is a report from the attached switch or automated operator.

From the AIX command line:

dellist -f *FileName.List*

Note: *FileName.List* must include the full path if the file is not in the current directory. The file name is unrestricted, but is easier to identify if the extension is *.list*.

Example:

dellist -f /my/directory/is/here/file_to_use.list

or (to use the current directory):

dellist -f file_to_use.list

Displaying details of a subscriber (showuser)

The showuser command displays the details for a given DirectTalk profile ID. The syntax of showuser is:

showuser

-e *Extension Number*

-f

[-m *Mailbox Number***]**

-s *Schedule Number*

-u *field name*

Use the **-f** option to display all information associated with the application profile. Use the **-s** option to display information associated only with notification schedules. Use the **-u** option to display details of the given field name.

Note: Although you can use the showuser command to display the information in mailboxes other than mailbox 1 (the default), remember that Message Center stores profile information only mailbox 1.

For example, the command, **showuser -e** 15004, would produce:

displaying details of a subscriber (showuser)

```
Profile . . . . . : 15004
Name . . . . . : Phil's test mailbox
Mailbox . . . . . : 1
  Digit name . . . . . : 7445783786245269
  State Table name . . . : IMC_STARTUP
  State Table Entry name : Start
  Subscriber class . . . : IMC_Basic
  Profile active greeting: 1
  No of active mailboxes : 1

  Partition . . . . . : IBM
  Preferred Name . . . . : Phil's test mailbox
  Mailbox status . . . . : 1
  Active greeting . . . . : 1
  Subscriber Type . . . . : 1 (Business - Local & Remote)
  Take Message . . . . . : 1
  Prompt level . . . . . : 0
  Referral number . . . . :
  Referral type . . . . . : 0
  Retrieval order . . . . : 0
  Access mode . . . . . : 0

  Number of new msgs . . : 2
  Number of saved msgs . : 1
  Number of outgoing msgs: 0
```

Changing details of a subscriber (changeuser)

Use the `changeuser` command to update any field in the application profile or mailbox. The syntax of `changeuser` is:

changeuser

-e *profile id*
-h *help*
-m *mailbox id*
-s *schedule id*
-u *field name*
-v *field data*

The default mailbox ID is 1.

For a list of valid field names see the tables that follow. Each table lists, in alphabetic order, the fields of a particular type, as follows:

- Table 7 on page 55
Mailbox: you can add this field to `/var/dirTalk/MessageCenter/IMCdefaults.file`.
- Table 8 on page 57
Application profile: some of these fields are present in `/var/dirTalk/MessageCenter/IMCdefaults.file`, but you cannot add any others.
- Table 9 on page 58

changing details of a subscriber (changeuser)

Notification schedule: you **must** specify the schedule ID with the -s parameter in changeuser and showuser commands.

Table 7. Mailbox field names used with changeuser command

Field Name	Description	Length	Field Data
access_mode	Access mode	1	0 = global (default) 1 = read only 2 = read/write
autosave_new_msgs	Save new messages automatically after listening?	1	0 = no (default) 1 = yes
bilingual_grt	Bilingual user greeting?	1	0 = no (default) 1 = yes
clock_pref	Clock preference used by notification schedules	1	0 = 12-hour (default) 1 = 24-hour
days_del_new_msgs	Number of days after which new messages are automatically deleted	3	<i>numeric string</i> 0 = never (default)
days_del_saved_msgs	Number of days after which saved messages are automatically deleted	3	<i>numeric string</i> 0 = never (default)
delete_new_msgs	Let subscribers delete new messages without listening to the whole message?	1	0 = no (default) 1 = yes
department	Used internally by Message Center to determine the partition to which a subscriber belongs	255	<i>text</i>
deputy_cos	Class of service for setting assistant and operator numbers	2	<i>numeric string</i>
deputy_number	Assistant number	20	<i>numeric string</i>
email_address	Address for e-mail notification	255	<i>text</i>
fax_number	Fax number	20	<i>numeric string</i>
fax_server	TR114 or SMTP/MIME address of fax server	255	<i>text</i>
first_time_user	First time user status	1	0 = New mailbox (default) 1 = Tutorial has been used

changing details of a subscriber (changeuser)

Table 7. Mailbox field names used with changeuser command (continued)

Field Name	Description	Length	Field Data
mailbox_active_grt	Active greeting number, played to callers	3	1 = Personal greeting 1 2 = Personal greeting 2 3 = Personal greeting 3 4 = Personal greeting 4 5 = Personal greeting 5 7 = Announcement-only greeting 9 = System default 10 = System default announcement-only 11 = Alternative system announcement-only 12 = Alternative announcement-only
mail_server	This defines the e-mail server information associated with the mailbox. Mail_server takes the values; server_name\naccount_name\npassword\ntype (where these values must be separated by the new line character \n)	255	<i>text</i> Type = 1 for IMAP Type = 2 for POP3
mail_status	indicates whether mailbox is active or locked	1	1 = active 2 = locked
notification_cos	Class of service for setting notification schedules, and fax and pager numbers	2	<i>numeric string</i>
notif_sched_status	Notification schedule status	1	0 = All off 1 = Active on
operator_number	Operator number	20	<i>numeric string</i>
pager_number	Paging bureau number	20	<i>numeric string</i>
pager_ref	Pager reference number	20	<i>numeric string</i>
password	Mailbox password	8	<i>numeric string</i>
password_change_date	Date after which password must be changed	8	YYYYMMDD
password_fail_count	Number of incorrect passwords entered	8	<i>numeric string</i>
play_headers	Play header before message?	1	0 = no (default) 1 = yes
postal_address	The fully qualified domain name of the LDAP server for the subscriber. If this is blank, then the system-wide LDAP server will be used.	255	<i>text</i>
preferred_name	User's name (for e-mail notification)	255	<i>text</i>
prompt_level	Level for prompts	1	0 = Normal prompts (default) 2 = Expert prompts

Table 7. Mailbox field names used with changeuser command (continued)

Field Name	Description	Length	Field Data
reachme_number	ReachMe number	20	numeric string
referral_number	Call-forwarding number	20	numeric string
referral_cos	Class of service for setting call-forwarding and ReachMe numbers	2	numeric string
retrieval_order	Order messages are processed	1	0 = FIFO (default) 1 = LIFO
send_msg_address	Address message before or after recording message	1	0 = Message first 1 = Address first
temp_deputy_number	Temporary assistant number	20	numeric string
temp_fax_number	Temporary fax number	20	numeric string
temp_pager_number	Temporary paging bureau number	20	numeric string
temp_pager_ref	Temporary pager reference number	20	numeric string
temp_reachme_number	The PIN to be used when receiving calls transferred via the reach-me facility.	255	text
temp_referral_number	Temporary call-forwarding number	20	numeric string
transfer_cos	Class of service for transfer by user jumpout	2	numeric string
user_status	Subscriber type: determines the menus and options available to the subscriber, and to callers to the subscriber's mailbox	2	0 = Standard 1 = Business - local & remote 2 = Business - local 3 = Residential 4 = Remote e-mail only
vpim_address	Address for SMTP/MIME delivery	255	text
vpim_msg_del_pref	Message delivery preference for VPIM	1	0 = Local 1 = Remote 2 = Local and remote
vpim_voice_type	VPIM voice format	1	0 = WAV 1 = AU 2 = 32KADPCM 3 = DirectTalk 4 = GSM compressed

Table 8. Application profile field names used with changeuser command

Field Name	Description	Length	Field Data
language	Language identifier	3	1 = US English 17 = UK English

changing details of a subscriber (changeuser)

Table 8. Application profile field names used with changeuser command (continued)

Field Name	Description	Length	Field Data
profile_active_grt	Active greeting profile; not used by Message Center	3	numeric string
state_table_label	Startup entry label	up to 15	text
state_table_name	Name of startup state table	up to 15	text
subscriber_class	Subscriber class name	up to 16	text
user_name	User's name (for display in dial-by-name and the graphical user interface)	50	text

Table 9. Notification schedule field names used with changeuser command

Field Name	Description	Length	Field Data
sched_active	Notification schedule active?	1	0 = Off 1 = On
sched_backup_number	Backup outcalling number	20	numeric string
sched_backup_num_typ	Backup outcalling number type	1	0 = Nomal telephone 1-9 = Various pager types
sched_backup_num_ref	Backup pager reference	20	numeric string
sched_days_of_week	Days of the week, can be a combination of any valid numbers	up to 7	1 = Monday 2 = Tuesday 3 = Wednesday 4 = Thursday 5 = Friday 6 = Saturday 7 = Sunday
sched_main_number	Initial outcalling number	20	numeric string
sched_main_num_type	Initial outcalling number type	1	0 = Nomal telephone 1-9 = Various pager types
sched_main_num_ref	Initial pager reference	20	numeric string
sched_notify_level	Urgency of messages that triggers notification	2	10 = Emergency 20 = Urgent 30 = Normal
sched_start_time	Start time (24-hour clock)	4	HHMM
sched_stop_time	Stop time (24-hour clock)	4	HHMM

Subscriber name

Use the changeuser command to update a subscriber's name, for example:

```
changeuser -e 1234 -u user_name -v "JOSEPH GREEN"
```

Note: If you have spaces in the field data, as in the subscriber's name above, put double quotes around the field data.

State table

Example:

```
changeuser -e 1234 -u state_table_name -v IMC_STARTUP
```

Note: Validation of state_table_name is done at run time.

Entry point

Example:

```
changeuser -e 1234 -u state_table_label -v Start
```

Note: Validation of state_table_label is done at run time.

Fax number

Example:

```
changeuser -e 247435 -u fax_number -v 248933
```

Fax server

Example:

```
changeuser -e 247435 -u fax_server -vTR114
```

LDAP server

A subscriber can use an LDAP server for finding the e-mail addresses of people in order to filter their e-mail messages, sending voice messages, replying to voice or e-mail messages, and forwarding voice or e-mail messages.

If the subscriber has an LDAP server configured, then Message Center will use that server, otherwise a system-wide default LDAP server will be used. To configure an LDAP server for a particular subscriber, set the **postal_address** field to the fully qualified domain name of the LDAP server.

Example:

```
changeuser -e 24735 -u postal_address-v ldapserver.ibm.com
```

Subscriber class

Subscriber classes are used to control the use of mailboxes. For example, one of the things you can specify in a subscriber class is the maximum number of entries in a distribution list. For more information about subscriber classes, how they work, and how to create them, see *DirectTalk for AIX: Designing and Managing Applications*.

Example:

```
changeuser -e 1234 -u subscriber_class -v IMC_Basic
```

changing details of a subscriber (changeuser)

Subscriber type

Subscriber types are used to control the menus and options available to a subscriber. For example, subscribers configured as Residential can only receive voice messages, record one greeting, and change their password.

The possible subscriber types are:

- 0** Standard
- 1** Business - local & remote
- 2** Business - local
- 3** Residential
- 4** Remote e-mail only

Example:

```
changeuser -e 1234 -u user_status -v 1
```

Language

Language is updated by supplying the DirectTalk language number, for example, 1 for US English.

Example:

```
changeuser -e 1234 -u language -v 1
```

Profile active greeting

Do not change this field; it is reserved for use by Message Center.

Password

Example:

```
changeuser -e 1234 -u password -v 3487
```

Partition

Message Center uses the department field to determine the partition to which a subscriber belongs. By default, subscribers can interact only with other subscribers belonging to the same partition.

Don't set this field manually. Instead, use the Message Center Interface Tool (MCIT) to set a subscriber's partition or move a subscriber from one partition to another.

Greeting selection

The mailbox active greeting numbers used by Message Center are:

- 1** Personal greeting number 1
- 2** Personal greeting number 2

changing details of a subscriber (changeuser)

- | | |
|----|---|
| 3 | Personal greeting number 3 |
| 4 | Personal greeting number 4 |
| 5 | Personal greeting number 5 |
| 7 | Announcement only greeting |
| 9 | System default greeting |
| 10 | System default announcement-only greeting |
| 11 | Alternative system announcement-only |
| 12 | Alternative announcement-only greeting |

If *mailbox active greeting number* is set to anything other than one of the above, Message Center uses personal greeting 1.

Note: This is the *mailbox active greeting number*, not the *profile active greeting*. Message Center does not use the profile active greeting for greeting information.

Example:

```
changeuser -e 1234 -u mailbox_active_grt -v 3
```

Owner status

Do not change this field; it is reserved for use by Message Center.

Taking message status

Do not change this field; it is reserved for use by Message Center.

Note: Message Center uses the mailbox active greeting number to decide whether or not to take messages. If the greeting number is set to 7, 10, 11, or 12, Message Center does not take messages.

Prompt level

Message Center uses two levels of prompt, normal and expert. When using the changeuser command to update prompt level use the following values:

- | | |
|---|----------------|
| 0 | Normal prompts |
| 2 | Expert prompts |

Example:

```
changeuser -e 1234 -u prompt_level -v 0
```

Referral number

Message Center uses the referral number field to hold the number used when forwarding all calls for a subscriber to another number.

changing details of a subscriber (changeuser)

Example:

```
changeuser -e 1234 -u referral_number -v 4153598562
```

ReachMe security

Message Center can be configured on a per-subscriber basis to require subscribers to enter a PIN in order to receive telephone call transferred via the reach-me facility. If a PIN is configured in the field **temp_reachme_number**, then the subscriber will be prompted to enter it. If this field is left blank, then calls will be transferred without requiring a PIN.

Example:

```
changeuser -e 24735 -utemp_reachme_number -v 1234
```

Referral type

Do not change this field; it is reserved for use by Message Center.

Retrieval order

Message Center processes messages in First In First Out (FIFO) order by default.

The administrator can change the order to Last In First Out (LIFO). Use the following values when using the changeuser command to update retrieval order:

0	FIFO
1	LIFO

Example:

```
changeuser -e 1234 -u retrieval_order -v 0
```

Note: We recommend that you always specify FIFO. Experience has shown that subscribers use LIFO less effectively when managing their messages.

Mailbox in use

DirectTalk uses a mailbox_busy flag to prevent the same mailbox from being logged into simultaneously by two callers, which could easily cause confusion if the two callers are working with the same message queue. You should not normally need to update this mailbox_busy flag. However, if the system keeps saying that a mailbox is in use when it clearly isn't, you can unlock it by setting the mailbox_busy flag to 0.

Example:

```
changeuser -e 1234 -u mailbox_busy -v 0
```

Assistant and temporary assistant numbers

The assistant number (also known as deputy number) is additional subscriber information you can see using the `showuser` command, and update using the `changeuser` command. The temporary assistant number can be changed in the same way.

Example (to change the assistant number):

```
changeuser -e 1234 -u deputy_number -v 345664
```

Play header preference

Play header preference controls whether the subscriber hears the full message header played before each message. Valid settings are:

0 Don't play header

1 Play header

Example (to change play header preference):

```
changeuser -e 1234 -u play_header -v 0
```

First time user status

When subscribers use Message Center for the first time, they might want to be introduced to Message Center and guided through the setup and tutorial dialogs. If `FirstTimeUsage` is set, the value of the `first_time_user` field controls the status of the subscriber; there are two possible values:

0 Mailbox has never been entered

1 The user has listened to the tutorial already

Example:

```
changeuser -e 1234 -u first_time_user -v 1
```

Notification schedules

Notification schedules can be updated either by individual subscribers using the telephone handset when they are signed on to Message Center, or from the World Wide Web, or using the `changeuser` command. For example:

```
changeuser -e 1234 -s 1 -u sched_main_number -v 246027
```

Notification schedules need two triggers to activate them: the mailbox field, `notif_sched_status`, which acts as a global on and off switch for all schedules, and the `sched_active` field to enable individual schedules.

To enable notification schedules:

```
changeuser -e 1234 -u notif_sched_status -v 1
```

changing details of a subscriber (changeuser)

Then, to activate schedule 1:

```
changeuser -e 1234 -s 1 -u sched_active -v 1
```

Note: Make sure that all the relevant fields in the schedule are set correctly before activating it.

Searching for a subscriber (finduser)

The finduser command searches for one or more subscribers, either by application profile or user name. You can use a fuzzy search, which can return more than one profile. The output of finduser is displayed on the screen, or you can pipe it to a file.

The syntax of finduser is:

```
finduser  
-e extension number  
-u user name  
-l fuzzy search  
-h help
```

You specify either **-e** or **-u**: if you use no options, all profiles are listed.

Examples:

To list all profiles that start with 15400:

```
finduser -e 15400% -l
```

To list all profiles with John in the name:

```
finduser -u %John% -l
```

To list all profiles with O'Connor in the name:

```
finduser -u "%O"CONNOR%" -l
```

In the above example, note that there are the two single quotes between the O and C, and double quotes around the whole name.

Unlocking a mailbox (changeuser)

A subscriber's mailbox is locked after the cumulative number of failed password attempts reaches the value of ProfilePasswordLimit as specified in the Global Variable Modification section of MCIT. To reset the failed password count from the command line:

```
changeuser -e 1234 -u password_fail_count -v 0
```

Unlocking the system (changeuser)

When the global password limit is exceeded, all subscribers are locked out of the system. To reset the global password failure count use:

```
changeuser -e 999999 -u password_fail_count -v 0
```

If you want to find out how many times passwords failed, before resetting the global password failure count, use:

```
showuser -e 999999 -u password_fail_count
```

If you use the global password limit on your system, you need to reset the failure count regularly. For example, you could run the following script as part of your regular system housekeeping:

```
DATE='date'
COUNT='showuser -e 999999 -u password_fail_count'
echo $DATE Total failed passwords today = $COUNT >> GLOBALPW.LOG
changeuser -e 999999 -u password_fail_count -v 0
```

You could also use this script to record the number of password failures over a period of time and use these statistics to set the global password limit accordingly.

Moving an application profile to a new system (moveprofile)

The moveprofile command moves one or more users to a new system or extension. You can move the greeting header and greetings, the audioname, and all new and saved messages and any message attachments. However, you can't use this command to copy distribution lists.

If you want to move all the profiles in a system, including their distribution lists, onto another system, use the **vm_backup** and **vm_restore** commands (see “Backing up your Message Center system” on page 70).

The moveprofile command is in the \$CUR_DIR/ca/IMC_MoveProfile_dir/utils directory.

The IMC_MoveProfile custom server must be running before you use moveprofile. If IMC_MoveProfile has an IPL status of INSTALLED you will need to start it.

The syntax of moveprofile is:

```
moveprofile
-e profile id
-f filename
[-a]
[-g]
[-h]
[-l]
[-p server port]
```

moving an application profile to a new system (moveprofile)

[-r]
[-s *server address*
[-u]
[-v]

Parameters

-e profile ID

The profile ID or extension number of a subscriber. The list function operates by default with this parameter. This is a mandatory parameter if you do not use the -f flag.

-f filename

The file must contain a list of the profile IDs of the subscribers. Each of these profile IDs must be terminated with a new line character. This is a mandatory parameter if you do not use the -e flag.

-a The audio name of the subscriber.

-g The recorded greetings and greeting header of the subscriber.

-h The help panel.

-l The load function searches for the files saved by the unload function. If they exist, it loads the contents into storage and creates the appropriate voice segments or messages.

-p server port

The default is 25113.

-r The subscriber's application profile.

-s server address

The TCP/IP address of the DirectTalk system running the custom server. The default is 127.0.0.1.

-u The unload function reads the file containing the subscriber's associated data, and writes it to disk in the current directory (\$CUR_DIR/ca/IMC_MoveProfile_dir/utls).

-v The subscriber's new, saved, and outgoing voice messages with any attachments.

Moving a subscriber's profile

To move a profile to another system, change the directory to \$CUR_DIR/ca/IMC_MoveProfile_dir/utls and issue the command:

moveprofile -e nnnnnn -u

This unloads all the appropriate files into the current directory. Copy these files to the moveprofile directory on the target system, then issue the command:

moveprofile -e nnnnnn -l

moving an application profile to a new system (moveprofile)

When loading a profile onto a new system, the outgoing voice messages are not reloaded. If a message has no sending profile, it is treated as if it had come from an external caller.

Before loading a profile, check that the startup state table and subscriber classes exist on the target system, or you will get errors when loading the new profile. For information about subscriber classes see *DirectTalk for AIX: Designing and Managing Applications*.

Renaming a subscriber's application profile

To rename a profile, unload the profile, then rename the files as appropriate. For example:

moveprofile -e 247027 -u

246027.profile	→	241234.profile
246027.audio	→	241234.audio
246027.greeting.0	→	241234.greeting.0
246027.greeting.1	→	241234.greeting.1
246027.voice.s.1	→	241234.voice.s.1
246027.voice.s.2	→	241234.voice.s.2
246027.voice.n.1	→	241234.voice.n.1

Use the moveprofile command to load the profile:

moveprofile -e 241234 -l

Don't forget to delete the old profile if necessary (see "Deleting a subscriber (deluser)" on page 52).

Note: The user name of the new profile will have an asterisk (*) prefix, because the profile ID and user name have to be unique. You can change this using the changeuser command (see "Subscriber name" on page 58) after deleting the old profile ID.

Listing all the subscribers (listuser)

The listuser command lists the application profiles on the DirectTalk system. This command does not have any parameters. The syntax of listuser is:

listuser

The output is saved in \$CUR_DIR/oamlog/IMCprofilelist. The profile ID, name, and digit name for each subscriber are listed. The file is overwritten each time this command is used.

listing all the subscribers (listuser)

Note: When you run listuser, other processes might be locked out of the database until it completes. On smaller databases (up to 1000 subscribers), the impact is likely to be minimal. On larger databases, it could cause a short-term drop in performance. For this reason, we recommend that you use listuser sparingly, and at off-peak times.

Handling Message Center statistics (FormatStats)

Message Center has a trace facility that lets you follow time-recorded events for subscribers and callers. These events are stored in \$OAM_LOG_PATH/IMC_Stats.log. For a description of the record format and meaning of the action mnemonics, see the IMC_STATS state table on page 226.

If you want to send a copy of each record to the IMC_Stats custom server, remove comments in the IMC_STATS state table. The ASCII source file for this state table is called stats. You can then process these records as you want, by updating the source code in IMC_Stats_dir. For information on the IMC_Stats custom server see page 279.

Use the FormatStats utility to interpret the log file and help you with problem determination. FormatStats displays its output on your screen. Alternatively, you can write it to an HTML file that you can process in batch mode overnight, giving you useful reports each morning.

FormatStats utility can be found in \$CUR_DIR/ca/IMC_Stats_dir/utlis. The syntax of FormatStats is:

FormatStats

-h
-i *filename*
-o *filename*
-w *filename*

Parameters

-h Online help.

-i filename
 Use the file, filename, as the input file. The default is IMC_Stats.log in the \$OAM_LOG_PATH directory.

-o filename
 Route the output to the specified filename in the current directory.

-w filename
 Create an HTML formatted file, filename, in the current directory.

Sending a broadcast message

An authorized administrator can broadcast messages to every mailbox on the system, or arrange for others to do so. The administrator can create an exclusion file of mailboxes that should not receive the broadcast.

To send a broadcast message, the authorized sender sends the message to be broadcast to a special mailbox defined by the broadcast message application profile. See “How Message Center uses application profiles” on page 13.

You can also send broadcast messages to subscribers in a particular partition. See page 76 for more information.

Creating subscriber or caller banner messages

An administrator or other authorized person can create a standard banner message to be played to all subscribers who log in to Message Center. A banner message can similarly be played to all callers before the greeting selected by the subscriber (for example “Please note that today is a public holiday”).

Use the IMC_RECORDCOMP2 state table to record your banner messages. Record your:

- Subscriber banner message in voice segment 6392.
- Caller banner message in voice segment 6446. This voice segment is played before the subscriber’s greeting.
- Caller banner message in voice segment 6447. This voice segment is played after the subscriber’s greeting.

Note: Subscriber and caller banner messages are played across the whole system. To provide different banner messages for different partitions, you need to customize the relevant custom servers, for example, IMC_SBR_MENU and IMC_CLR_SMEN.

Creating distribution lists

From the DirectTalk window you should only view Message Center distribution lists. You can create distribution lists using the IMC_Dlist custom server; for more information see page 253.

Attention: Do not create, update, or delete distribution lists from the DirectTalk windows. Distribution lists have audio names associated with them that cannot be handled from the DirectTalk windows.

Creating shared distribution lists

You can create shared distribution lists for the convenience of all subscribers.

Create shared distribution lists in the system distribution list profile mailbox, mailbox 444444. Sign on to mailbox 444444 and create these lists in the normal way using the telephone.

Note: Before you sign on to mailbox 444444 for the first time, you need to reset the password.

creating distribution lists

Creating distribution lists from other lists

You can create distribution lists from other lists, such as your location's telephone list, using the IMC_Dlist custom server. For information on how to use this custom server see "IMC_Dlist" on page 253.

Note: There is a limit of 90 members on the number of entries you can have in a distribution list.

Backing up your Message Center system

Back up your Message Center system regularly so that you can restore your system in case of a disaster. You can follow several types of backup strategy, including:

Full system backup

This backs up the AIX system on which DirectTalk and Message Center run. A full system backup of rootvg (the volume group of disks where the base AIX system is installed) can be taken with the mksysb command.

If you have data on other volume groups of disks, you also need to back up each of these with the savevg command to restore these volume groups. For example, you might have your DirectTalk executables in /usr/lpp/dirTalk, or your voice data stored in /home/dirTalk, both in separate volume groups. Always shut down DirectTalk and DB2 before taking a full system backup.

Take a full system backup at least once a year.

Message Center executables backup

Back up all the Message Center executables (unless they have been modified or moved to other applications) by exporting the MessageCenter application from the Application Manager (see *DirectTalk for AIX: Managing and Monitoring the System*) or with the command:

```
dtexport -f MessageCenter.executables -appl MessageCenter
```

If you have added any Message Center state tables or prompts, these might be in the Default application, which you might also want to export from the Application Manager or with the command:

```
dtexport -f MessageCenter.modifications -appl Default
```

If you have moved the state tables, prompts, or any other components of your system to other applications, you might also want to export these applications in a similar way.

Of course, if you modify ASCII versions of state tables or prompts, you also need to back up your ASCII versions with the AIX backup or tar commands. For example, if you keep all your modified state tables in a directory called dtmail_ascii, you can back up the contents of that directory to file MessageCenter.ascii.tar using the command:

```
tar -cvf MessageCenter.ascii.tar dtmail_ascii
```

Take backups of your Message Center executables whenever you make any significant changes to the system. In each of the examples we have given, the backups were taken to files. Ideally, you should copy these backups to a tape or other removable medium by moving all the individual files to a directory such as `dtmail_executables` and then running a command such as:

```
backup -f /dev/rmt0 dtmail_executables
```

Message Center messages and mailboxes backups

All the application profiles and mailboxes created by the `adduser` command are initially placed in the User application. Although you can export application profiles and mailboxes using the `dtexport` command or the Application Manager, the messages associated with the mailboxes are not exported. You can use the Message Center command, `vm_backup` (see “Voice message and mailbox backup utility” on page 297), to take a backup of Message Center application profiles, mailboxes, distribution lists, notification schedules, and voice messages. For example:

```
vm_backup -f /dev/rmt0
```

Although you will get a cleaner backup, with less chance of half-written or conflicting data, if you shut down your system before backing it up, it is possible to run `vm_backup` while Message Center is still processing calls. You should aim to take a `vm_backup` every night if possible, or at least once a week.

There might be other high availability strategies with which IBM and its business partners can help you. These might include the use of mirrored disks and ADMS. Contact your IBM representative to discuss your backup strategy if you are interested in high availability solutions.

Chapter 4. Message Center Interface Tool (MCIT)

This chapter tells you how to use the Message Center Interface Tool (MCIT) as an alternative way of managing a Message Center system.

The topics covered in this chapter are:

- “Starting MCIT”
- “System partitioning” on page 75
- “Subscriber administration” on page 81
- “Custom server management” on page 88
- “Scheduling a Message Center backup” on page 89
- “Global variable modifications” on page 90
- “Remote System Administration (RSA) utility” on page 96

Starting MCIT

MCIT is a menu-based tool that operates in much the same way as the AIX administrative tool, SMIT. You use it in one of two ways:

1. If you are using an ASCII terminal, use the character-based menu system.
2. If you have X-Windows running and you’ve configured your DISPLAY environmental variable, use an X-Windows based application.

There are three different sets of MCIT menus, depending on your level of authority. The *dtuser* user has the highest level of authority and is considered to be the Message Center *super-administrator*.

You can have additional administrators with more limited function. When these administrators log on to AIX, they are placed immediately into the MCIT menus without receiving an AIX prompt.

The *dtuser* user launches MCIT by running **mcitty** or **mcit** on the command line. **mcitty** starts the character-based menus. If you are using the AIX console, or have the DISPLAY environmental variable configured, **mcit** starts as an X-Windows GUI application; otherwise, it starts as a character-based menu.

Here is what the main character-based MCIT screen looks like:

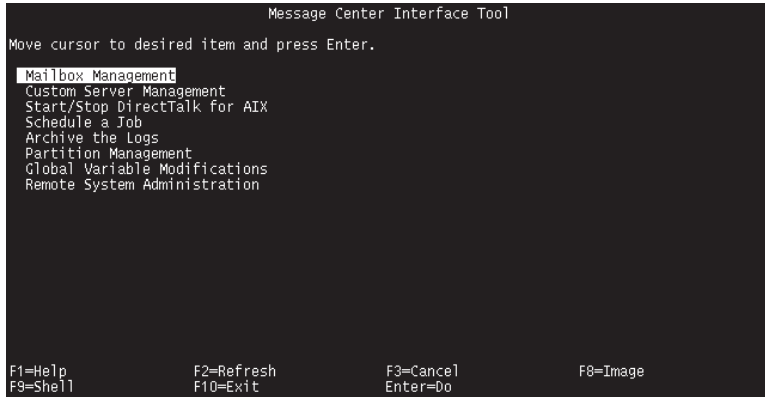


Figure 6. MCIT main screen — character-based

Here is what the X-windows based MCIT screen looks like:

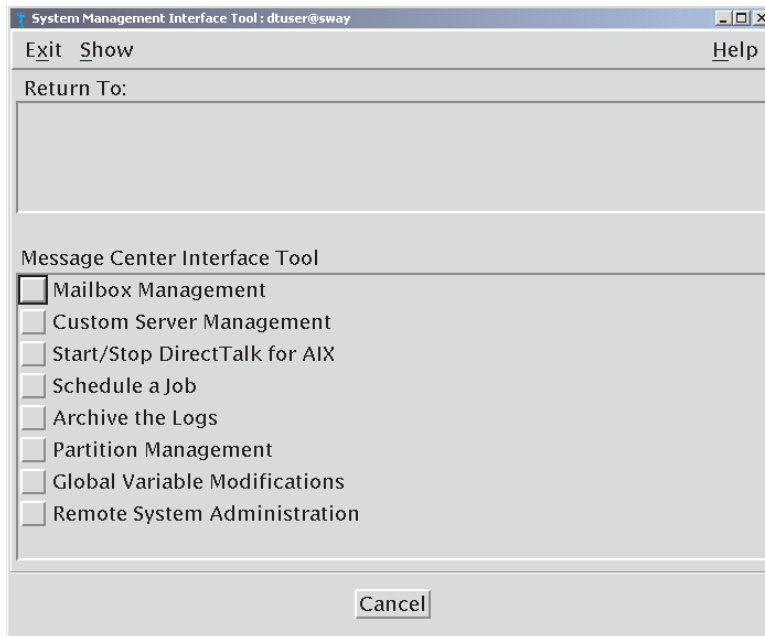


Figure 7. MCIT main screen — X-windows based

In the examples in this chapter, we show the character-based menus. This is probably the way that you'll do it most frequently, especially if you're managing Message Center remotely over a LAN or dial-up connection, rather than directly on the system console.

System partitioning

System partitioning lets you create voice messaging *partitions* that are isolated from each other. Each partition has its own administrator.

You can also configure the system so that subscribers within one partition cannot interact with subscribers in another partition (this is the default setting).

You can use only MCIT to administer system partitioning. This section introduces partitioning, and tells you how to manage the partitions. The topics covered are:

- “Inter- and intra-partition visibility”
- “Adding partitions”
- “Listing partitions” on page 77
- “Listing partition details” on page 77
- “Deleting partitions” on page 78
- “Partition administrators” on page 78

Inter- and intra-partition visibility

There is a global setting within Message Center that determines *partition visibility*. If the system is set up for **intra-partition** visibility, subscribers within a particular partition cannot interact with subscribers in another partition. If the system is set up for **inter-partition** visibility, subscribers are allowed to interact with subscribers within other partitions.

One possible use for inter-partition visibility would be for a large organization to place each department in a separate partition, but have individual administrators for each partition.

Set the *PartitionVisb* variable in the Global Variable Modification section of MCIT to determine the type of partitioning to be used at your site.

Adding partitions

The MCIT screen for adding a new partition is as follows:

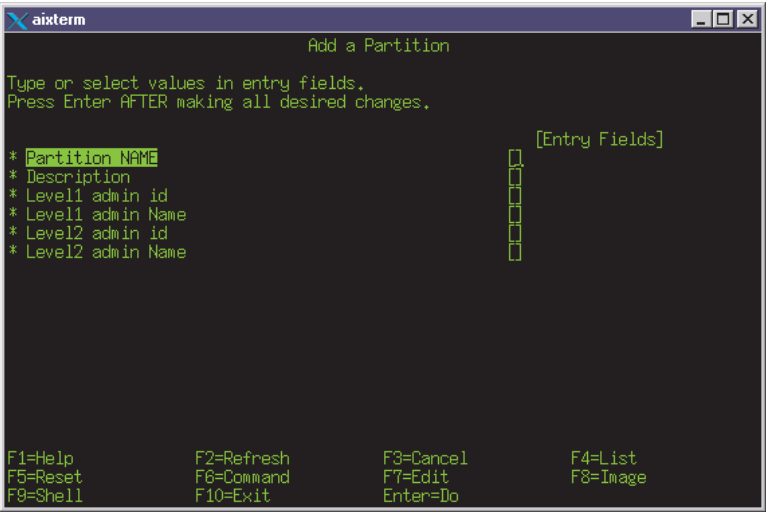


Figure 8. MCIT screen for adding partitions

Here’s what you should enter in each field:

Field	Description
Partition NAME	<p>The name of the partition. If your system services multiple companies, this will typically be the name of the company. If you are using partitioning to divide a single company into logical divisions, this can be the name of a department or division.</p> <p>The name must be 15 characters or fewer and must begin with a letter. The only characters allowed are A-Z, a-z, 0-9, and underscores.</p>
Description	A descriptive name for the partition.
Level1 admin id	The AIX login ID for use by the first level-1 administrator. You can always add additional level-1 administrators once you’ve created the partition.
Level1 admin Name	The full name of the level-1 administrator.
Level2 admin id	The AIX login ID for use by the first level-2 administrator. You can always add additional level-2 administrators once the partition has been created.
Level2 admin Name	The full name of the level-2 administrator.

When you create a partition, the following happens:

- A DirectTalk application is created with the same name as the partition. All subscribers belonging to this partition will be placed within this partition.
- The level-1 and level-2 AIX accounts are created. These accounts are configured so that when users log on to AIX, they are placed directly into MCIT. This is for security

purposes. The MCIT menu that they see is reduced in function, allowing them to perform operations only within their partition.

- A new Message Center profile is created for sending broadcast messages to other subscribers within the partition. This profile has a name of the form 666xxx. To send a broadcast message, log on as this subscriber and send a voice message to the profile 777777. The custom server IMC_Broadcast must be running in order for this to work.
- A IMCdefaults.file is created for the partition. This file is placed in the directory \$CUR_DIR/ca/mcit. The name of the file is IMCdefaults.file.**partition_name**. When the partition is first created, this file is based on the standard IMCdefaults.file file.

Listing partitions

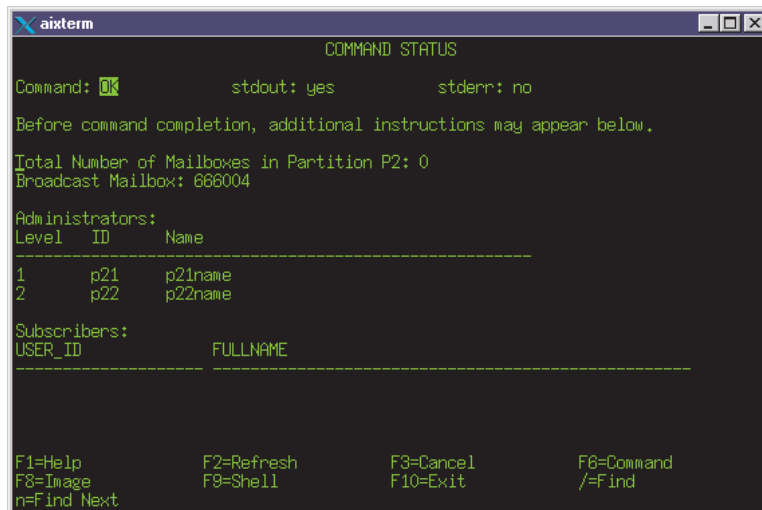
MCIT provides a means of displaying all the partitions that you currently have defined. This is within the **Partition Management** menu.

Listing partition details

You can use this option of the **Partition Management** menu to view the details of a particular partition. Once you select the partition you're interested in, you can view the following:

- The total number of mailboxes within the partition
- The mailbox used to send broadcast messages to subscribers within the partition
- All the level-1 and level-2 administrators created for this partition
- A list of the subscribers that belong to this partition

Here is a sample of the output produced:



```

COMMAND STATUS
Command: OK          stdout: yes          stderr: no
Before command completion, additional instructions may appear below.
Total Number of Mailboxes in Partition P2: 0
Broadcast Mailbox: 666004

Administrators:
Level  ID      Name
-----
1      p21      p21name
2      p22      p22name

Subscribers:
USER_ID      FULLNAME
-----
F1=Help      F2=Refresh    F3=Cancel     F6=Command
F8=Image     F9=Shell     F10=Exit      /=Find
n=Find Next

```

Figure 9. Sample output from listing partition details

Deleting partitions

You can use this option of the **Partition Management** menu to delete a partition from the Message Center system.

You can delete a partition only if it doesn't contain any subscribers. You can either delete all the subscribers before deleting the partition, or move all the subscribers to another partition.

When you delete a partition, the following happens:

- The broadcast profile for the partition is deleted.
- Any level-1 and level-2 administrators for the partition are removed from AIX.
- The DirectTalk application for the partition is deleted.
- The IMCdefaults.file.partition_name file is deleted from the directory \$CUR_DIR/ca/mcit.

Partition administrators

Within MCIT, there are three levels of administrator:

- The super-administrator
- Level-1 administrators
- Level-2 administrators

Super administrator

This is the *dtuser* user. The super-administrator has full access to all the features and functions of MCIT.

A super-administrator can create additional level-1 or level-2 administrators for any partition within the system using the Administrator Management menu, shown below:



Figure 10. Super administrator: Administrator Management menu

Level-1 administrators

Each partition created has at least one level-1 administrator. These administrators can perform subscriber administration only within their partition.

Here is the main MCIT menu for level-1 administrators:

system partitioning

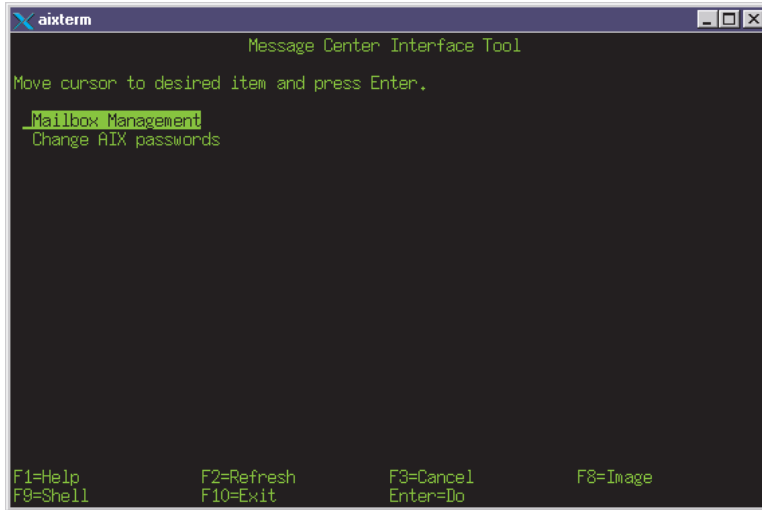


Figure 11. Level-1 administrators main MCIT menu

Level-2 administrators

Each partition created has at least one level-2 administrator. They can perform the same functions as level-1 administrators, but they can also work with certain Message Center log files.

Here is the main MCIT menu for level-2 administrators:

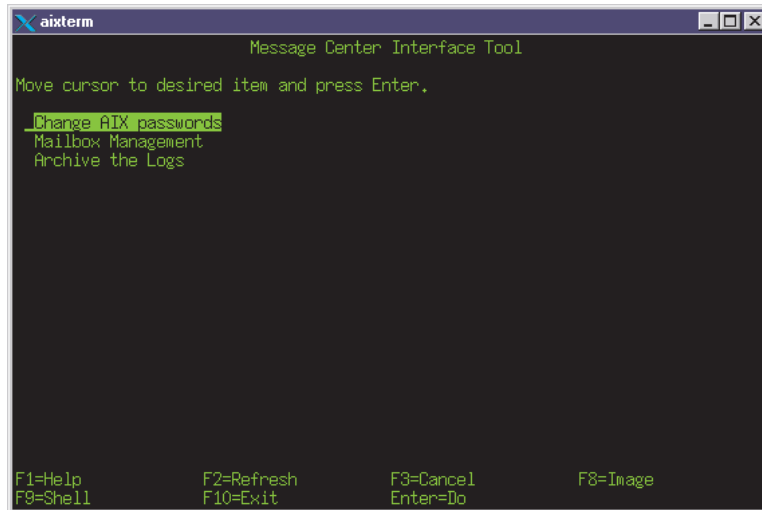


Figure 12. Level-2 administrators main MCIT menu

Subscriber administration

MCIT provides a convenient way of managing subscribers. Although you can do most of the tasks using the command line utilities described in “Chapter 3. Subscriber administration” on page 49, if you are using partitioning on your system, you *must* use MCIT for your administration.

Here is the main **Mailbox Management** menu:

subscriber administration

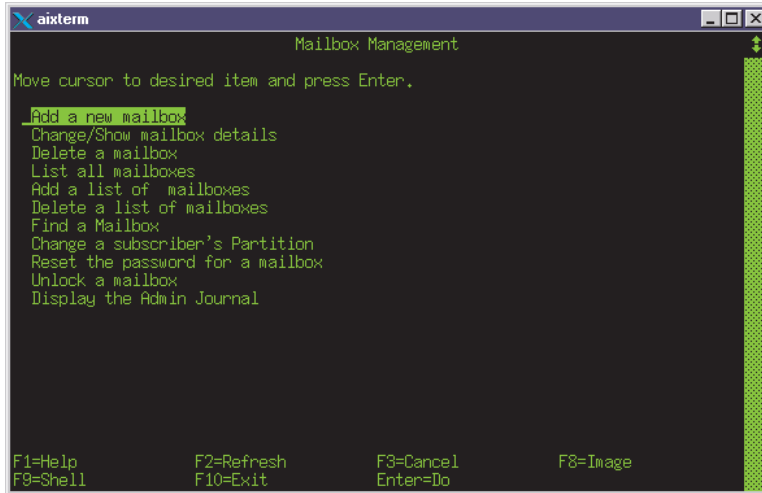


Figure 13. Mailbox Management menu

The rest of this section deals with the options on that menu. The topics covered are:

- “Adding a new subscriber”
- “Adding a list of new subscribers” on page 84
- “Deleting a subscriber” on page 85
- “Deleting a list of subscribers” on page 85
- “Displaying and changing the details of a subscriber” on page 86
- “Unlocking a mailbox” on page 87
- “Resetting a subscriber’s password” on page 88
- “Moving a subscriber to another partition” on page 88

Adding a new subscriber

All levels of administrators can add subscribers to Message Center. Level-1 and level-2 administrators can add subscribers only to the partition that they administer. Super-administrators can add subscribers to any partition.

If you are using partitioning (that is, you have created at least one partition), when creating a mailbox as the super-administrator, you are prompted to select the partition to which the mailbox should belong.

If you are creating a mailbox as a level-1 or level-2 administrator, the mailbox is placed in the partition that you are authorized to administer.

When adding a mailbox, you use the following screen:

```

aixterm
Add a New Mailbox

Type or select values in entry fields.
Press Enter AFTER making all desired changes.

[Entry Fields]
* Partition Name      User
* Extension number    260010      #
* Name                [ ]          #
* Password            00000000    +
* State table name     IMC STARTUP  +
* State table entry label Start    +#
* Language            1          +
* Subscriber class     IMC Basic    +
* Subscriber type      [ ]          +

F1=Help      F2=Refresh    F3=Cancel    F4=List
F5=Reset     F6=Command    F7=Edit     F8=Image
F9=Shell     F10=Exit      Enter=Do

```

Figure 14. Add a new mailbox menu

Here's a description of the fields:

Field	Description
Partition Name	<p>The partition to which the subscriber is being added. You can modify this field only if you are logged on as the super-administrator.</p> <p>If you are a level-1 or level-2 administrator, this field defaults to the partition that you are authorized to administer.</p> <p>If you are not using partitioning (that is, you have created no partitions), the subscriber is placed in a default partition called <i>User</i>.</p>
EXTENSION Number	The extension for the mailbox.
NAME	<p>A subscriber name.</p> <p>To use dial-by-name effectively, enter the subscriber's surname followed by their first name. Make sure that you type names in a consistent way (such as capital letters, last name, first name), to make sorting and searching for them more efficient. For example:</p> <p>SMITH PAT SMITH JOHN</p>
Password	The password to which the subscriber's mailbox is set when it is created.

subscriber administration

Field	Description										
State Table Name	<p>The state table to be launched for this mailbox. This is typically IMC_STARTUP, but might differ depending on the configuration of the system.</p> <p>For example, with partitioning in use, the super-administrator can create different startup state tables for each partition.</p> <p>The super-administrator sees a list of all the state tables on the system. Level-1 and level-2 administrators see a restricted list, the exact contents of which are defined by the super-administrator.</p>										
State Table Entry Label	The entry point for the state table in the <i>State Table Name</i> field										
Language	The language code for the subscriber. This is typically 1 (for US English), but might be changed if your system has been configured to support multiple languages.										
Subscriber Class	Determines various limits for the mailbox, such as the maximum number of messages that the subscriber is allowed to have. This is typically IMC_Basic, but it is possible to use alternative subscriber classes, created by the super-administrator.										
Subscriber Type	<p>The type of menu a subscriber gets, as follows:</p> <table><tr><td>0</td><td>Standard</td></tr><tr><td>1</td><td>Business - local & remote</td></tr><tr><td>2</td><td>Business - local</td></tr><tr><td>3</td><td>Residential</td></tr><tr><td>4</td><td>Remote e-mail only</td></tr></table>	0	Standard	1	Business - local & remote	2	Business - local	3	Residential	4	Remote e-mail only
0	Standard										
1	Business - local & remote										
2	Business - local										
3	Residential										
4	Remote e-mail only										

If no partitions are defined, MCIT fills in the fields based on what is in the file `/var/dirTalk/MessageCenter/IMCdefaults.file`.

If you are adding a subscriber to a particular partition, MCIT fills in the fields based on the contents of `$CUR_DIR/ca/mcit/IMCdefaults.file.partition_name` where *partition_name* is replaced with the name of the actual partition.

Adding a list of new subscribers

The *Add a list of mailboxes* menu option allows you to add multiple subscribers to the system using a plain ASCII file containing the extension numbers and names of the subscribers, and their passwords.

The name of the file must end in `.lst`. The file must contain one entry on each line, with the entry format being:

```
EEEE:UUU UUU:PPP:
```

where:

EEEE is the extension number

UUU UUU
is the subscriber name and details

PPPP is the voice mailbox password

For example:

1234:JOSEPH GREEN:4224:

Note: Make sure that you include the : (colon) at the end of each parameter, including the last one.

Level-1 and level-2 administrators do not have access to an AIX command line prompt. They must first create the file on another machine and then FTP the file to their home directory.

When using this menu option, MCIT does not allow you to enter a filename. Instead, you must select the file from a list that is presented when you press F4. To generate the list, MCIT looks in the administrator's home directory and only displays files that end in *.lst*.

As a super-administrator, you must follow the same guidelines. However, because you have access to the command-line prompt, you can create the file directly on Message Center; you don't need to transfer the file to the system using FTP.

If the list is being added by a level-1 or level-2 administrator, the subscribers are automatically put in the partition that the administrator is authorized to administer. If the list is being added by the super-administrator, MCIT prompts for a partition to be selected. If there are no partitions defined, subscribers are put in the default *User* partition.

Deleting a subscriber

The *Delete a mailbox* menu option allows you to delete a single DirectTalk application profile. Level-1 and level-2 administrators can delete only subscribers that are within their partition. The super-administrator can delete any subscriber on the Message Center system.

Deleting a list of subscribers

Use the *Delete a list of mailboxes* menu option to delete a single DirectTalk application profile for each entry in a list.

The name of the file must end in *.lst*. The file must contain one entry on each line, and the format of the entry is:

EEEE:

where EEEE is the extension number.

subscriber administration

Note: Make sure you include the : (colon) at the end of the line.
When using this menu option, MCIT does not allow you to enter a filename. Instead, you must select the file from a list that is presented when you press F4. To generate the list, MCIT looks in the administrator's home directory and only displays files that end in *.lst*.

Displaying and changing the details of a subscriber

Use the *Change/Show mailbox details* menu option to view, and optionally change, the details of a subscriber. Here is a typical *Change/Show mailbox details* screen:

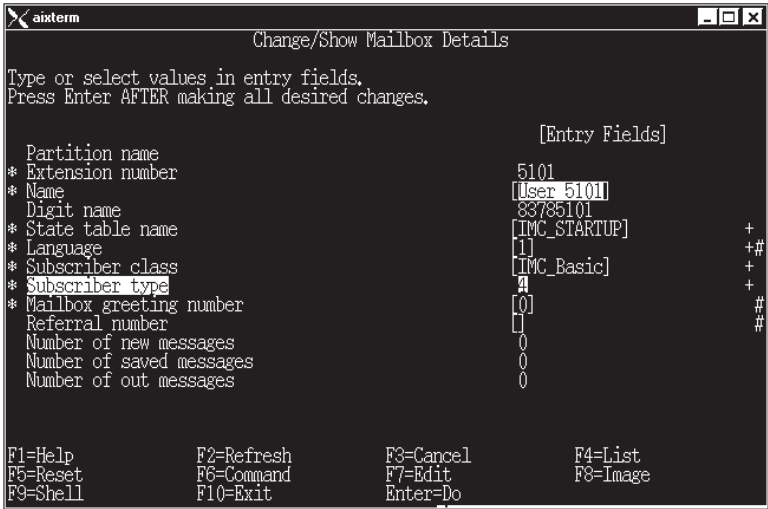


Figure 15. Change/Show mailbox details screen

Here's a description of the fields:

Field	Description
Partition NAME	The partition to which the subscriber is being added. You cannot modify this field from this screen.
EXTENSION Number	The extension for the mailbox.
NAME	<p>A subscriber name.</p> <p>To use dial-by-name effectively, enter the subscriber's surname followed by their first name. Make sure that you type names in a consistent way (such as capital letters, last name, first name), to make sorting and searching for them more efficient. For example:</p> <p>SMITH PAT SMITH JOHN</p>
Digit Name	The DTMF keys that correspond to the subscriber's name. You cannot modify this field.

Field	Description
State Table Name	<p>The state table to be launched for this mailbox. This is typically IMC_STARTUP, but might differ depending on the configuration of the system.</p> <p>For example, with partitioning in use, the super-administrator can create different startup state tables for each partition.</p> <p>The super-administrator sees a list of all the state tables on the system. Level-1 and level-2 administrators see a restricted list, the exact contents of which are defined by the super-administrator.</p>
Language	The language code for the subscriber. This is typically 1 (for US English), but might be changed if your system has been configured to support multiple languages.
Subscriber Class	Determines various limits for the mailbox, such as the maximum number of messages that the subscriber is allowed to have. This is typically IMC_Basic, but it is possible to use alternative subscriber classes, created by the super-administrator.
Subscriber Type	<p>The type of menu a subscriber gets, as follows:</p> <p>0 Standard</p> <p>1 Business - local & remote</p> <p>2 Business - local</p> <p>3 Residential</p> <p>4 Remote e-mail only</p>
Mailbox greeting number	The greeting that the subscriber has active.
Referral number	Message Center uses this field to hold the number used when forwarding calls for a subscriber to another number.
Number of NEW messages	The number of new messages the subscriber has in the mailbox.
Number of SAVED messages	The number of saved messages the subscriber has in the mailbox.
Number of OUT messages	The number of outgoing messages the subscriber has in the mailbox.

Unlocking a mailbox

A subscriber's mailbox is locked after the cumulative number of failed password attempts reaches the value of ProfilePasswordLimit specified in the Global Variable Modification section of MCIT. Use the *Unlock a mailbox* menu option to reset the failed password count.

subscriber administration

Resetting a subscriber's password

Use the *Reset the password for a mailbox* menu option to change a subscriber's password. When the subscriber next logs into their mailbox, they will have to change their password.

This option is most useful when subscribers forget their password (usually after a holiday, or even a long weekend).

Moving a subscriber to another partition

Use the *Move a Mailbox to a Partition* menu option to move a subscriber to another partition. You must be logged into AIX as the super-administrator to do this.

Here's the screen you see:

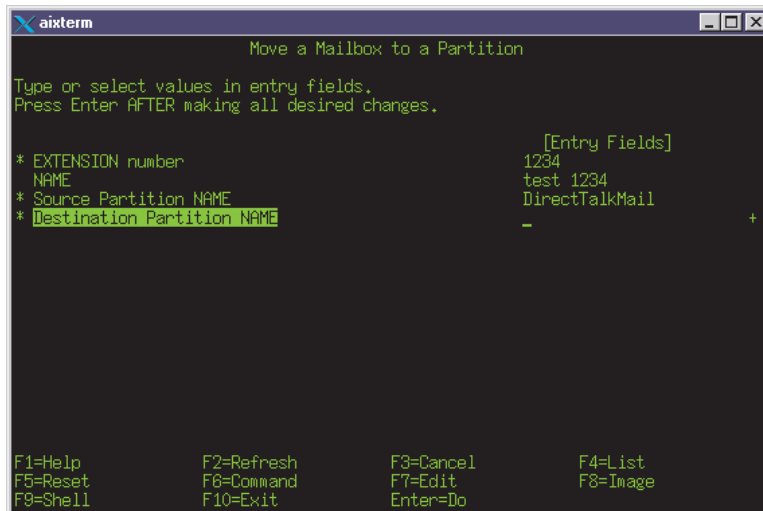


Figure 16. Move a Mailbox to a Partition menu

Press the F4 function key for a list of partitions from which you can choose the new partition for the subscriber.

Custom server management

The *Custom Server Management* menu allows you to:

- Start or stop individual custom servers
- Start all custom servers that are set to AUTOEXEC
- Stop all custom servers
- View the status of a particular custom server or all custom servers

Here is the Custom Server Management menu:

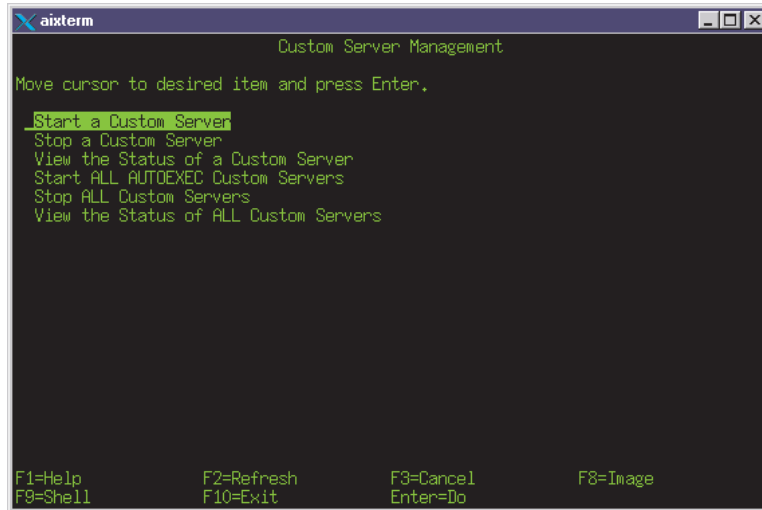


Figure 17. Custom Server Management menu

You must be logged on as the super-administrator to have these options available.

Scheduling a Message Center backup

From the *Schedule a job* menu, super-administrators can schedule a Message Center backup, as well as viewing and canceling scheduled jobs.

Note: Currently, the only type of job that can be scheduled is a backup job.

Here is the *Schedule a job* menu:

scheduling a Message Center backup

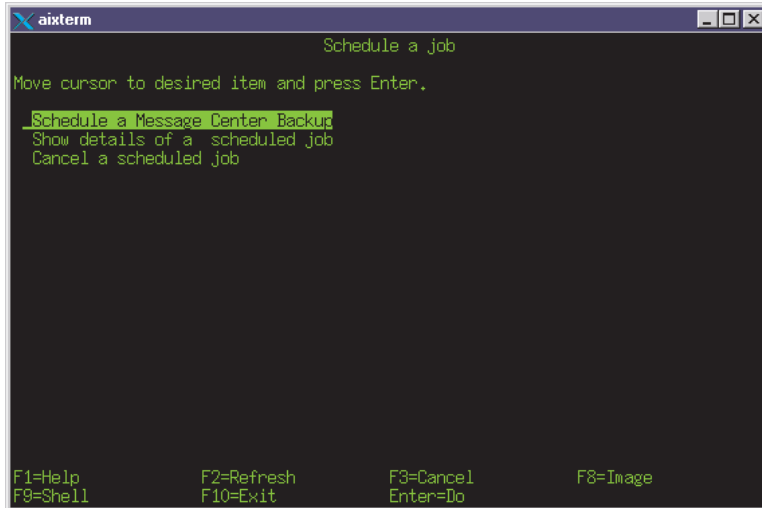


Figure 18. Schedule a job menu

When a scheduled job runs, it backs up Message Center using the *vm_backup* utility. It backs up all the voice message and mailbox data on the system:

- Application profiles
- Subscriber classes
- Mailboxes
- Mailbox notification schedules
- Mailbox distribution lists
- Greetings
- Audio names
- Messages
- Distribution list names

We recommend that you schedule these backups when the system isn't being heavily used, for example, early in the morning or late in the evening.

Global variable modifications

Message Center uses various settings that determine how it functions and what functionality is available to subscribers. These settings or variables are stored in the file `$CUR_DIR/ca/ini/IMC_MessageCenter.ini`. The **Global Variables** menu allows you to easily view and update these settings without your having to manually edit the configuration file.

Here is an example of the Global variables management screen:

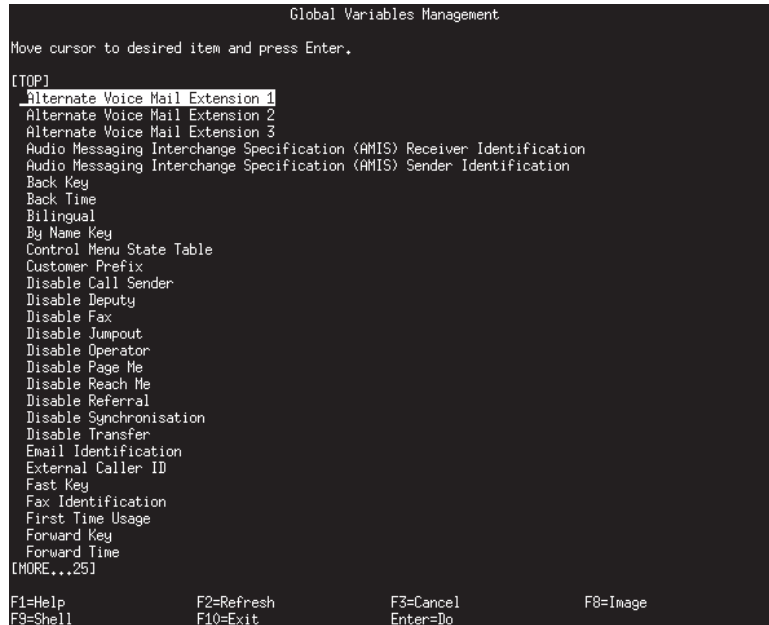


Figure 19. Global Variables Management screen

Here's a description of all the fields that are available in the Global Variables Management screen

Field	Description
Alternate Voice Mail Extension 1; Alternate Voice Mail Extension 2; Alternate Voice Mail Extension 3	You can have up to four extension numbers defined to call in to Message Center. The primary number is defined in VmailExtension; define the other numbers in AltVmailExt1, AltVmailExt2, and AltVmailExt3. If you do not want to use more than one extension number for Message Center, set the unused values to the same value as VmailExtension.
Audio Messaging Interchange Specification (AMIS) Receiver Identification	The profile ID to be used as the sending profile ID when an external message is received by a Message Center subscriber. The default is 999998.
Audio Messaging Interchange Specification (AMIS) Sender Identification	The profile ID to be used as the temporary receiver profile ID when an external message is sent by a Message Center subscriber. The default is 999997.
Back Key	The key to be used to skip backward when listening to a message. The default value is the 7 key. (This parameter is used only if the SimplePlay parameter is set to No.)
Back Time	The time in milliseconds to skip backward when the BackKey is pressed when listening to a message. The default value is 4000ms. (This parameter is used only if the SimplePlay parameter is set to 0.
Bilingual	Enables or disables the use of bilingual greetings on this Message Center system: 0 - Bilingual greetings cannot be used; 1-Bilingual greetings can be used

scheduling a Message Center backup

Field	Description
By Name Key	The key to be used to signal that a destination for a message is to be dialed by name, rather than by entering a numeric destination. The # key is the default.
Control Menu State Table	This state table presents menus in the call-answering dialogs. Five caller menu state tables, IMC_CLR_SMEN (for Standard subscribers) and IMC_CLR_SMEN_01 to IMC_CLR_SMEN_04 (for Business - local & remote, Business - local, Residential, and Remote e-mail only subscribers), are supplied with Message Center. The key usage is consistent with the International Standard ISO/IEC 13714. You can replace any of these with a customized state table.
Customer Prefix	Three letter prefix used for DirectTalk State Tables, Custom Servers & Voice Directories on Message Center customer Installations. The default is XXX.
Disable Call Sender	Whether subscribers are allowed to request a transfer to the sender of a message: No Enable the call sender function Yes Disable the call sender function The default is Yes.
Disable Deputy	Whether callers are allowed to request a transfer to a subscriber's assistant: No Enable assistant transfer Yes Disable assistant transfer The default is Yes.
Disable Fax	Enable or disable fax support: No Enable fax support Yes Disable fax support The default is No.
Disable Jumpout	Whether callers are allowed to request a transfer to another number: No Enable jump out Yes Disable jump out The default is Yes.
Disable Operator	Whether callers are allowed to request a transfer to the operator: No Enable transfer to operator Yes Disable transfer to operator The default is No.
Disable Page Me	Whether callers are allowed to request a transfer to a pager: No Enable PageMe Yes Disable PageMe The default is Yes.
Disable Reach Me	Whether callers are allowed to request a transfer to a ReachMe number: No Enable ReachMe Yes Disable ReachMe The default is Yes.

Field	Description
Disable Referral	<p>Whether Message Center can attempt to transfer callers to the subscribers call-forwarding (referral) number:</p> <p>No Enable transfer to referral number</p> <p>Yes Disable transfer to referral number</p> <p>The default is Yes.</p>
Disable Synchronisation	<p>Whether Message Center supports integrated messaging:</p> <p>No Integrated messaging is supported</p> <p>Yes Integrated messaging is not supported</p> <p>The default is Yes.</p>
Disable Transfer	<p>Whether subscribers are allowed to request a transfer to another number:</p> <p>No Enable subscriber call transfer</p> <p>Yes Disable subscriber call transfer</p> <p>The default is No.</p>
Email Identification	The application profile ID used to identify e-mail voice messages. The default is 555555.
External Caller ID	The application profile ID associated with messages left by external or unknown callers. You can change this, but if you do you must also create an application profile with a profile ID of the same value.
Fast Key	The key to be used to speed up playback when listening to a message. The default value is 6. This parameter is used only if the SimplePlay parameter is set to No.
Fax Identification	The application profile ID used to identify fax voice messages. The default is 333333.
First Time Usage	<p>Whether first-time users should be conducted through the process of changing password, recording an audio name and greeting, and running the optional tutorial:</p> <p>No Do not use the first-time process for new users</p> <p>Yes Use the first-time process for new users</p> <p>The default is No.</p>
Forward Key	The key used to skip forwards when listening to a message. The default value is the 9 key. This parameter is used only if the SimplePlay parameter is set to No.
Forward Time	The time in milliseconds to skip forwards when the ForwardKey is pressed when listening to a message. The default value is 4000ms. This parameter is used only if the SimplePlay parameter is set to No.
Global Password Limit	The maximum cumulative number of invalid passwords across all profiles that can be entered before Message Center stops access to all mailboxes. This limit could be triggered by, for example, a hacker systematically trying to sign on to a large number of mailboxes. To disable global password limit checking, set this parameter to 0. A typical setting of this parameter is 100. If the GlobalPWlimit is exceeded, all subscribers are locked out of the system. If you set this parameter to a value other than 0, you will have to reset it regularly to prevent subscribers eventually being locked out of the system. To reset the global password failure count, see "Unlocking the system (changeuser)" on page 65.

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Field	Description
Internal Prefix	The 3 letter prefix for the version of Message Center being used.
Loud Key	The key used to increase the volume of playback when listening to a message. The default is 2. This parameter is used only if the SimplePlay parameter is set to No.
Maximum Password Attempts	The maximum number of invalid passwords that can be entered before Message Center disconnects the caller. A typical setting of this parameter would be 3. The default is 3.
Menu State Table	This state table presents menus in the subscriber dialogs. For Standard subscribers, there is a general menu state table, IMC_SBR_MENU, and several menu-specific state tables, with names beginning IMC_SBR_MENU_. For Business - local & remote, Business - local, Residential, and Remote e-mail only subscribers, there are equivalents: four state tables called IMC_SBR_MENU_01 to IMC_SBR_MENU_04 for the general menus, and state tables with names beginning IMC_SBR_MNU_S for specific menus. In all cases, the key usage is consistent with the International Standard ISO/IEC 13714. You can replace any of these with a customized state table.
Message Center Jumpout Auto	<p>What is to happen when MCMainControl is greater than zero (that is, MCSelectedProfile has been set to the required profile ID to be signed on to Message Center), and a caller has interrupted a greeting with a sign-on request:</p> <p>No Message Center assumes that the caller wants to sign on to the called number.</p> <p>Yes Message Center assumes that the caller wants to sign on to the profile ID defined by the parameter MCSelectedProfile.</p> <p>The default is No.</p>
Message Center Main Control	<p>Whether Message Center is to prompt for a subscriber profile ID, password, or both:</p> <p>-2 Prompt for both profile ID and password, regardless of whether the profile ID is valid, and suppress the beep usually sounded when a subscriber enters a valid ID with new messages.</p> <p>-1 Prompt for both profile ID and password, regardless of whether the profile ID is valid.</p> <p>0 Prompt for both profile ID and password, if the profile ID entered is valid.</p> <p>1 Prompt for password but not profile ID. Use the profile ID supplied in the parameter MCSelectedProfile.</p> <p>2 Do not prompt for profile ID or password. Go directly to the Message Center main menu. Use the profile ID supplied in the parameter MCSelectedProfile.</p>
Message Undeletion	<p>This controls the "undeletion of messages" feature:</p> <p>No Messages cannot be undeleted</p> <p>Yes Messages can be undeleted</p> <p>The default is No.</p>

Field	Description
Minimum Message Time	The minimum message length in milliseconds that Message Center saves if a caller finishes recording by hanging up. This allows you to discard messages where the caller listens to a subscriber's greeting, intends to hang up without leaving a message, but accidentally records one. If you are planning to use MinMessageTime, experiment with different settings to establish the best value for your system and your organization. Messages completed by the caller pressing the # key are always saved, no matter how short. If you want to save all messages, whether very short or not, set MinMessageTime to 0.
Operator Number	The number of the switchboard operator or help desk at your location. In their greetings, Message Center subscribers can invite callers to press 0 to jump out to the operator, instead of leaving a message. OperatorNum is the number to which a call will be transferred if a caller presses 0 at any time before, during, or after leaving a message. Note: The Message Center administrator should set the operator number when installing Message Center see 8. Also note that subscribers can set their own operator number.
Partition Visibility	This controls the visibility of MC partitions to one another. Valid values are : 'intra' or 'inter'
Password Expiration Days	The number of days before a password expires and a new password must be chosen. To disable password expiry, set this parameter to 0. The default is 30 days.
Pause Key	The key used to pause when listening to a message. The default value is the 8 key. This parameter is used only if the SimplePlay parameter is set to No.
Profile Password Limit	The cumulative maximum number of invalid passwords that can be entered over a series of sign-on attempts before Message Center disables the mailbox. The administrator can re-enable mailbox access. A typical value for this parameter is 7. To disable cumulative password limit checking by profile ID, set this parameter to 0. The default is 0.
Quick Message Identification	The application profile ID associated with messages sent using the Message Center quick message facility. The default value is 888888. You can change this, but if you do you must also create an application profile with a profile ID of the same value, and record an audio name such as "quick message".
Quiet Key	The key used to decrease the volume of playback when listening to a message. The default is 5. This parameter is used only if the SimplePlay parameter is set to No.
Remote Destination field	Whether the message destination is a remote destination for which there is no local profile on this system: No Yes
Simple Play	Whether Message Center plays voice messages from the Message Center state tables using the PlayVoiceMessage action or the IMC_PlayMsg custom server. In the latter case the subscriber can use the speed-up/slow-down facility and also increase or decrease the volume at which the message is played. Values are: No Use the IMC_PlayMsg custom server. Yes Use the simple PlayVoiceMessage method. The default is No.

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Field	Description
Slow Key	The key used to slow down playback when listening to a message. The default value is the 4 key. This parameter is used only if the SimplePlay parameter is set to No.
System Distribution Allowed	Whether subscribers can use system-wide distribution lists: No Not allowed Yes Allowed The default is Yes.
System Distribution Identification	The profile ID used to contain all system-wide distribution lists; that is, those available to all subscribers. The default is 444444.
Telephony Portal Extension	This is the extension number that telephony portal users would dial when they wish to check their messages.
Text-To-Speech Engine	This controls the text-to-speech engine used. Valid values are: 'none', 'BeST_Speech', 'AcuVoice' or 'ViaVoice'.
Unique Distribution Lists	Whether distribution list IDs can be assumed to be unique or whether a distribution list ID might potentially conflict with a profile ID or an external destination ID. In the latter case, when sending a message, Message Center asks the subscriber if the destination is a distribution list or a single destination. It is possible to create a distribution list with the same name as a profile (or vice versa with an existing distribution list). If you do, you can never use the distribution list, because any messages destined for it always go to the identically-numbered profile instead. (This can happen only on systems with telephone numbers of four digits or fewer; 9999 is the highest distribution list number possible.)
Voice Mail Extension	The number of Message Center itself. If CalledNumber is the same as VmailExtension, Message Center assumes that the calling party wants to sign on to Message Center (rather than hear a greeting and leave a message). If you are using IMC_STARTUP, you must set VmailExtension to the DID extension number you have allocated for Message Center.

Remote System Administration (RSA) utility

The topics covered in this section are:

- “Starting the RSA utility”
- “Setting up external messaging” on page 97
- “Remote nodes” on page 100
- “Modifying a remote node” on page 102
- “Defining subscribers allowed to use restricted nodes” on page 102

Starting the RSA utility

MCIT also provides a **Remote System Administration** utility. You can use this to define:

- Parameters used by your Message Center system for external messaging
- External AMIS-A, VPIM, and DTM-D nodes
- A subscriber’s authority to use external nodes

From the MCIT main menu, select **Remote System Administration**. This will produce the Remote System Administration utility screen shown in Figure 20

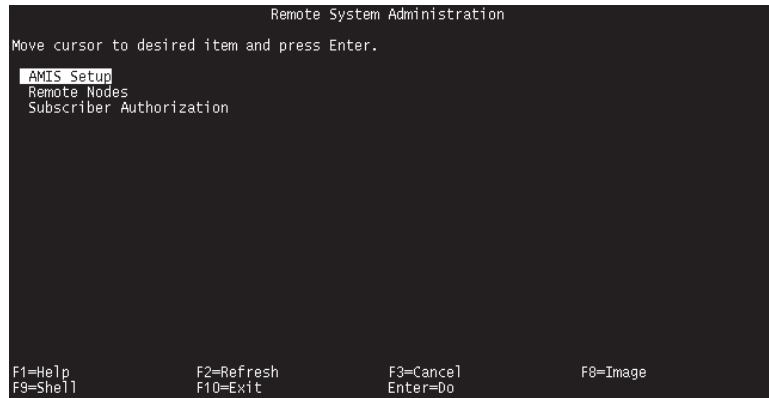


Figure 20. The RSA utility initial screen

Move the cursor to one of the following items available from the menu:

AMIS Setup

To work with the parameters relating to your own Message Center system

Remote Nodes

To create, modify, delete or list remote nodes

Subscriber Authorization

To define subscribers permitted to use restricted remote nodes

Setting up external messaging

From the RSA main menu select **AMIS Setup** and press Enter. This will produce the AMIS Setup screen as shown below:

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```
AMIS Setup
Type or select values in entry fields.
Press Enter AFTER making all desired changes.

[TOP]                                     [Entry Fields]
* Local node code                        [999997] #
  Mailbox for AMIS_O                     [999998] #
* Mailbox for AMIS_D                     [999999] #
* External ID                            [777777] #
* Broadcast ID                           [555555] #
* Email ID                               [6] #
* Size of internal number                 [2] #
* Number of AMIS output lines             [2] #
* Internal location index length          [2] #
* Included in extension number            no +
* External location index length          [3] #
* International dialing code              [00] #
* External line code                      [9] #
* Pause required                         no +
[MORE...7]

F1=Help      F2=Refresh      F3=Cancel      F4=List
F5=Reset     F6=Command     F7=Edit       F8=Image
F9=Shell     F10=Exit       Enter=00
```

Figure 21. The RSA utility AMIS Setup screen

```
AMIS Setup
Type or select values in entry fields.
Press Enter AFTER making all desired changes.

[MORE...8]                                     [Entry Fields]
* Internal location index length          [2] #
* Included in extension number            no +
* External location index length          [3] #
* International dialing code              [00] #
* External line code                      [9] #
* Pause required                         no +
* National area code prefix              [0] #
* Internal country code                  [0] #
* Internal area code                     [1] #
* Internal number                        [154017] #
* External country code                   [44] #
* External area code                     [705] #
* External number                        [568939] #
[BOTTOM]

F1=Help      F2=Refresh      F3=Cancel      F4=List
F5=Reset     F6=Command     F7=Edit       F8=Image
F9=Shell     F10=Exit       Enter=00
```

Figure 22. The RSA utility AMIS Setup screen (continued)

Descriptions of the fields in the **AMIS Setup** screen and the **AMIS Setup** continuation screen are as follows:

Table 10. Fields in the RSA utility AMIS Setup screen

Field	Description
Local node code	The identification code of the local node for use by other remote systems. When remote nodes send messages to the local node, they use this as a prefix to numbers.
Mailbox for AMIS_O	The application profile ID of the sending application. We recommend that you use the default value of 999997. If you want to change it, make a copy of the supplied 999997 profile using Save As in the DirectTalk windows to create an application profile ID matching your chosen number.

Table 10. Fields in the RSA utility AMIS Setup screen (continued)

Field	Description
Mailbox for AMIS_D	The application profile ID used as the sending profile ID by the receiving application. We recommend that you use the default value of 999998. If you want to change it, make a copy of the supplied 999998 profile using Save As in the DirectTalk windows to create an application profile ID matching your chosen number.
External ID	The external profile ID (default 999999). See “External caller application profile” on page 13
Broadcast ID	The broadcast application profile ID (default 777777). See “Broadcast application and administrator profiles” on page 16
E-mail ID	The VPIM and e-mail application profile ID (default 555555). See “VPIM and e-mail application profiles” on page 16. Note: You can specify only one application profile here. If you use the RSA utility to configure VPIM destinations, IMC_Sendmail can use only one application profile ID.
Size of internal number	The number of digits used to access mailboxes on your private network. This length includes the internal location index. For example, if your internal location index is two digits, and your mailbox IDs are four digits, the size of internal numbers is six digits.
Number of AMIS output lines	The number of output lines that can be concurrently used by the sending application for connecting to other voice messaging systems.
Internal location index length	The part of an extension number on a private network that identifies the location. For example, if you have a six-digit extension number, the first two digits might be the location index. All internal location index numbers must be the same length.
Included in extension number	Whether the Internal Location Index is part of the mailbox ID in the receiving system. For example, if the location index is 39 and the receiving profile ID is 392811, specify yes ; if the location index is 39 and the receiving profile ID is 2811, specify no .
External location index length	The length of the remote node codes. This must be longer than the internal location index length.
International dialing code	The international dialing code. The number that must be dialed for a particular country. For example, to dial the UK from another country a prefix of 0044 is used.
External line code	Message Center dials this number for an external line; leave this field blank if a number is not needed.
Pause required	After dialing the External Line Code, if you need to wait for a new dialing tone before dialing the rest of the number, enter yes in this field; if not, no
National area code prefix	In some countries a prefix is needed when you dial a national area code. For example, in the UK a prefix of 0 is used.
Note: The next three numbers (codes) make up the phone number that will receive 'Internal' AMIS-A Messages on this system. For more information on these codes, see “Setting up external messaging” on page 97.	
Internal country code	Set this to 0 (zero) for a private numbering plan. This is the default and would not normally require changing. Do not set to blank as an entry in this field is mandatory.

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Table 10. Fields in the RSA utility AMIS Setup screen (continued)

Field	Description
Internal area code	Leave this blank for a private numbering plan. This is the default and would not normally require changing.
Internal number	Enter the number which another AMIS-A system in your private telephone network would dial to send messages to this system. This may be the same number as the application profile which you set to invoke the IMC_AMIS_D state table in the section titled "Implementing Analog External Messaging". However, if the number which another system would dial is not identical with the application profile, always enter the number which should be dialed rather than the application profile itself.
Note: The next three numbers (codes) make up the phone number that will receive 'External' AMIS-A Messages on this system. For more information on these codes, see "Setting up external messaging" on page 97.	
External country code	Enter the code for the country in which the Message Center system is based in. You must always enter the country code even if you do not intend to send AMIS-A messages to systems in other countries. For example, for U.K. enter 44, for U.S. enter 1.
External area code	Enter the code for the area in which the Message Center system is based. You must always enter the Area code, even if you do not intend to send AMIS-A messages to systems in other areas.
External number	Enter the number (minus country code and area code) which an external AMIS-A system would need to dial to send messages to this system. This may be the same number as the application profile which you set to invoke the IMC_AMIS_D state table in the section titled "Implementing Analog External Messaging". However, if the number of the application profile which another system would dial is not identical with the application profile, always enter the number which should be dialed rather than the application profile itself.

Complete the fields you require as shown in Figure 21 on page 98 and Figure 22 on page 98.

Remote nodes

1. From the RSA main screen move the cursor to select **Remote Nodes** and press Enter.
2. This will present the options available to you displayed in the Remote Nodes menu as shown in Figure 23 on page 101.

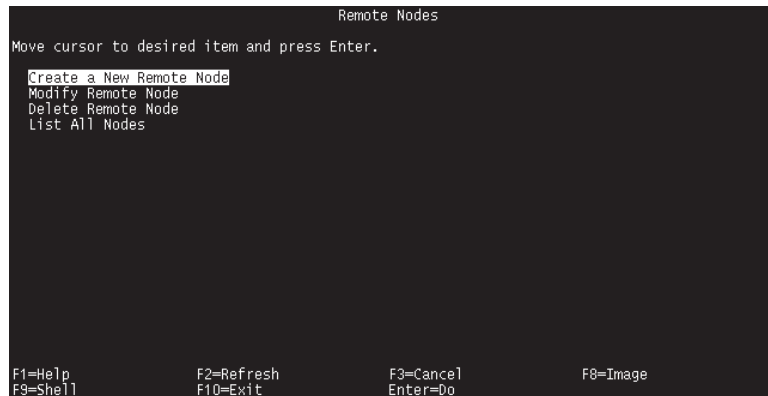


Figure 23. The RSA utility Remote Nodes screen

- Before you select **Create a new remote node**, see if there is an existing definition that you want to use as a template for a new one. If not, move your cursor to **Create a new remote node** in the displayed list and press Enter to produce the screen shown in Figure 24



Figure 24. The RSA utility Create a new remote node window

- Set the fields you want, then make a selection from the menu detailed at the bottom of the screen to set the remote node.

The descriptions of the fields that are in the **Create a new remote node** screen are:

Table 11. Fields in the Create a new remote node screen

Field	Description
Node number	The number for this node.
Country code	The country code of the receiving node.
Area code	The area code of the receiving node.

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Table 11. Fields in the Create a new remote node screen (continued)

Field	Description
Phone number	The phone number of the receiving node.
Name	The descriptive name of the receiving node. This field is optional.
Authorization required	If you want to restrict access to this node, enter Y; if not, enter N. Note: If you restrict access, you need to create user definitions for subscribers who are permitted to send messages to this node, as explained in “Defining subscribers allowed to use restricted nodes”.
Type	The method of transmitting messages to the remote destination: A AMIS-A; V VPIM; D DTM-D
Format	The voice format for the message (only needed for VPIM): V Voice (default) or 32KADPCM (VPIM default); W .wav; A .au; D DT compressed; G GSM.
TCP/IP Address	The TCP/IP address of the remote VPIM or DTM-D node
Node supports Message CenterAMIS V6	If this node is a compatible DirectTalkMail system supporting extended AMIS analog protocol, enter Y; if not, enter N.

Modifying a remote node

Note: You do not need to define your own Message Center system, unless you want to test external messaging without another voice mail system.

To change the details for an existing remote node select **Modify Remote Node** from the **Remote Nodes** menu and press Enter. In the next screen, either type the number of the remote node that you wish to modify, or select a node from the pop-up list, and press Enter. Change the fields as required.

Select **Delete Remote Node** menu to delete an existing remote node and press Enter. In the next screen, either type the number of the remote node that you wish to delete, or select a node from the pop-up list and press Enter. The details of the node that you wish to delete will be displayed. Press Enter to delete the node.

Select **List All Nodes** from the **Remote Nodes** menu to retrieve a list of all currently defined remote nodes. The remote node number and name will be displayed.

Defining subscribers allowed to use restricted nodes

If you define a node with the **Authorization Required** field set to **yes**, then you must define the subscribers that are allowed to use the remote node.

There are four levels of authority you can assign to a subscriber:

- Internal Use Authority

- External Use Authority
- External Use National Authority
- External Use International Authority

From the RSA main screen move the cursor to select **Subscriber Authorization** and press Enter. This will display the screen shown in Figure 25.

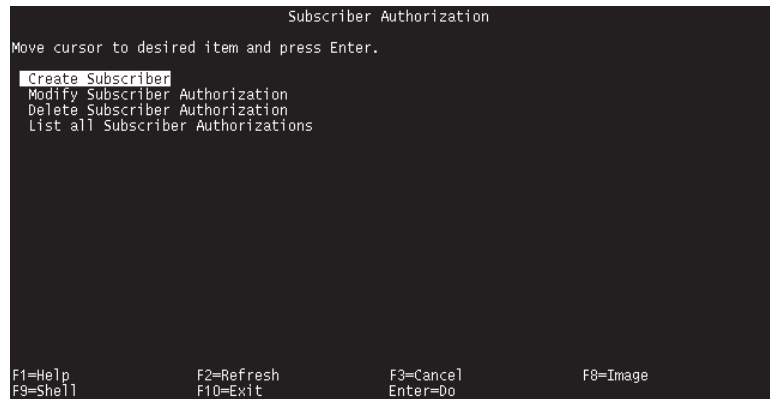


Figure 25. The RSA utility Subscriber Authorization screen

Select **Create Subscriber** from the **Subscriber Authorization** menu to define the authorization for a subscriber.

This will display the screen shown in Figure 26.



Figure 26. The RSA utility Create Subscriber screen

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The descriptions of the fields that are in the **Create Subscriber** screen are:

Table 12. Fields in the Create Subscriber screen

Field	Description
Subscriber Id	The subscriber profile number to which this definition applies.
Internal Use Authority	The subscriber can send messages to destinations within the internal (private) network that have been defined with the authorization flag set..
External Use Authority	The subscriber can send messages to destinations outside the internal network.
External Use National Authority	If External Use Authority has been given, this setting confirms authority to use messaging within the national boundaries.
External Use International Authority	If External Use Authority has been given, this setting confirms authority to use messaging outside the national boundaries.

Select **Modify Subscriber Authorization** from the **Subscriber Authorization** menu to change the details for an existing subscriber and press Enter.

In the next screen, either type the subscriber ID that you wish to modify or select a subscriber ID from the pop-up list and press Enter.

Change the fields as required.

Select **Delete Subscriber Authorization** from the **Subscriber Authorization** menu to delete the authorization for an existing subscriber ID and press Enter. In the next screen, either type the subscriber ID whose authorization you wish to delete or select a subscriber ID from the pop-up list and press Enter. The authorization details of the subscriber that you wish to remove will be displayed. Press Enter to delete the subscriber authorization

Select **List all Subscriber Authorizations** from the **Subscriber Authorization** menu to retrieve all defined authorizations for subscribers

Appendix A. The Message Center menus

Message Center provides very flexible menus. On any menu, any function can be assigned to any key. Moreover, any major function can be assigned to any menu. When you install Message Center you can customize the menus to suit your organization. For example, if distribution lists are very important to your subscribers, you can make handling distribution lists option 1 on the main menu.

The default menus shipped with Message Center are consistent with the international standard for the user interface to voice messaging systems, ISO/IEC 13714.

In this chapter, we list the menus for Standard subscribers. For other subscriber types, see the *IBM Message Center for DirectTalk: Subscriber's Guide*, for the subscriber type in which you are interested.

Standard subscriber menus

We show the structure of the following menus:

- "Standard functions" on page 106
- "Control (ISO)" on page 106
- "Playback" on page 106
- "Record" on page 107
- "Change number" on page 107
- "Main (*7)" on page 107
- "Receive (header) (*1)" on page 107
- "Receive (during message playback)" on page 107
- "Receive (after a message)" on page 108
- "Send (*2)" on page 108
- "Send to another" on page 109
- "Greeting options (*3)" on page 109
- "Personal options (*4)" on page 109
- "More personal options (*49)" on page 109
- "Select message preferences (*491)" on page 110
- "Audio name (*492)" on page 110
- "Distribution lists (*41)" on page 110
- "Work with list (*414)" on page 110
- "E-mail options (*42)" on page 111
- "Change password (*43)" on page 111
- "Notification schedules (*44)" on page 111
- "Work with notification schedules (*441)" on page 111
- "Create or update schedule (*4412)" on page 111
- "Work with notice board (*45)" on page 112

Standard subscriber menus

- “Call handling 1 (*5)” on page 112
- “Call handling 2 (*59)” on page 113

Standard functions

- * Control menu
- 0 Help
- # Enter or next

Control (ISO)

- *0 Contextual help
- *1 Receive messages
- *2 Send messages
- *3 Greeting options
- *4 Personal options
- *5 Call handling
- *6 Pause menu
- *7 Go to Main menu
- *8 Change language
- *9 Disconnect
- ** Go back one level (cancel)
- *# Exit Control menu (previous context)

Playback

This applies to the playback of greetings, audio names, and outgoing mail.

- 1 Play
- 2 —
- 3 Delete
- 4 Record
- 5 —
- 6 —
- 7 Rewind
- 8 Pause
- 9 Fast forward
- # Stop

Record

- 8 Pause
- # Stop

Change number

This menu is presented when setting or changing a number, such as the default fax number.

- 1 Listen
- 2 Change
- 3 Delete
- 7 Return

Main (*7)

- 1 Receive messages (played only if there are new messages)
- 2 Send messages
- 3 Greeting options
- 4 Personal options
- 5 Call handling
- 6 —
- 7 Return to sign-on
- 8 —
- 9 —

Receive (header) (*1)

- 1 Play message
- 2 Save
- 3 Delete
- 4 Reply
- 5 Forward
- 6 Call sender
- 7 Return
- 8 Replay header
- # Next header

Receive (during message playback)

- 1 Listen again

Standard subscriber menus

- | | |
|---|----------------|
| 2 | Louder |
| 3 | Delete message |
| 4 | Slower |
| 5 | Quieter |
| 6 | Faster |
| 7 | Skip back |
| 8 | Pause |
| 9 | Skip forward |
| # | Stop |

Receive (after a message)

- | | |
|---|--|
| 1 | Play message |
| 2 | — |
| 3 | Delete |
| 4 | Reply |
| 5 | Forward |
| 6 | Call sender |
| 7 | Return |
| 8 | Replay header |
| 9 | <i>Send to fax machine</i> (only active when message is a fax) |
| # | Next header |

Send (*2)

- Enter number or # for dial-by-name
 - Record message
- | | |
|---|-------------------|
| 1 | Play message |
| 2 | Send |
| 3 | — |
| 4 | Re-record message |
| 5 | Re-address |
| 6 | Comments |
| 7 | Cancel |
| 8 | Attributes |

Send to another

- 1 —
- 2 Send another
- 3 —
- 4 —
- 5 —
- 6 —
- 7 Return
- 8 —

Greeting options (*3)

- 1 Listen to header
- 2 —
- 3 Delete header
- 4 Record header
- 5 Select greeting
- 6 Work with greetings
- 7 Return
- 8 —
- 9 Hear header and selected greeting

Personal options (*4)

- 1 Distribution list options
- 2 e-mail options
- 3 Change password
- 4 Notification schedule options
- 5 Notice board options
- 6 —
- 7 Return
- 8 —
- 9 More options

More personal options (*49)

- 1 Select message preferences

Standard subscriber menus

- 2 Record audio name
- 3 Select language
- 4 Select prompt level
- 7 Return

Select message preferences (*491)

- 1 Play headers
- 2 New message delete
- 3 Autosave message
- 4 Send message header
- 5 Bilingual greeting
- 6 Clock preferences
- 7 Return

Audio name (*492)

- 1 Play
- 2 —
- 3 Delete
- 4 Record
- 5 —
- 6 —
- 7 Return
- 8 —
- 9 —

Distribution lists (*41)

- 1 Review lists
- 2 Create list
- 3 Delete list
- 4 Work with list
- 7 Return

Work with list (*414)

- 1 Review list
- 2 Add member

- 3 Delete member

E-mail options (*42)

- 1 Select message delivery preference
- 2 Select message delivery type
- 7 Return

Change password (*43)

Just press *43.

Notification schedules (*44)

- 1 Schedule 1
- 2 Schedule 2
- 3 Schedule 3
- 4 Schedule 4
- 5 Set notifications on or off
- 6 Temporary schedule
- 7 Return
- 8 Review active schedules
- 0 Help

Work with notification schedules (*441)

- 1 Listen to schedule
- 2 Create or update schedule
- 3 Delete schedule
- 4 Activate or deactivate schedule
- 5 —
- 6 —
- 7 Return
- 8 —

Create or update schedule (*4412)

- 1 Enter main number
 - 1 Enter pager type or 0
 - 2 Enter pager reference number
- 2 Enter backup number

Standard subscriber menus

- 1 Enter pager type *or 0*
- 2 Enter pager reference number
- 3 Enter start time
- 4 Enter stop time
- 5 Message priority
 - 1 All calls
 - 2 Urgent messages
 - 3 Emergency
- 6 Enter days
 - 1 Monday
 - 2 Tuesday
 - 3 Wednesday
 - 4 Thursday
 - 5 Friday
 - 6 Saturday
 - 7 Sunday
 - 8 Whole week

Work with notice board (*45)

- 1 Listen
- 2 Create or update
- 3 Delete
- 7 Return

Call handling 1 (*5)

- 1 Set ReachMe number
 - 1 ReachMe
 - 2 Temporary ReachMe
 - 7 Return
- 2 Set assistant number
 - 1 Assistant
 - 2 Temporary assistant
 - 7 Return
- 3 Transfer call

- 4 Work with outgoing mail
 - 1 Listen again
 - 3 Delete outgoing message
 - 7 Return
 - 8 Listen to header information
 - # Next outgoing message
- 5 Set call forwarding number
 - 1 Call forwarding
 - 2 Temporary call forwarding
 - 7 Return
- 7 Return
- 9 Set additional numbers

Call handling 2 (*59)

- 1 Set default fax number
- 2 Set temporary fax number
- 3 Set default pager number
- 4 Set temporary pager number
- 5 Set default pager reference number
- 6 Set temporary pager reference number
- 7 Return
- 8 Set operator number

Standard subscriber menus

Appendix B. Message Center voice segments

This appendix describes the voice segments in Message Center. They are listed numerically, giving the number of the segment and the wording in the segment. There are two directories:

- “IMC voice directory (voice segment details)” starting on this page
- “IMC_SYSTEM voice directory (voice segment details)” on page 183.

Instructions to the person recording the prompt are shown italicized in square brackets, for example:

Please try an alternative number or press * for more options. [*pause for ten seconds before going on-hook*]

IMC voice directory (voice segment details)

This voice directory contains voice segments used by Message Center. This directory is supplied with the same voice as the IMC_SYSTEM voice directory, so you can use the same voice for all Message Center prompts.

1000 AA - enter ID

Please enter the extension number of the person you are calling, followed by #. [*1 second pause*] To dial by name, begin with #.

1001 AA - enter own number

Please enter your own number, followed by #.

1002 AA - invalid extension

You entered an invalid extension number. Please try again.

2000 Bank - main menu

If you have a problem or complaint, press 1. To leave special instructions, press 2. To leave a personal message for your bank manager, press 3. To notify us of a change of address, press 4. To return to the start, press 7.

2001 Bank - enter A/C

Please enter your account number, followed by #.

2002 Bank - welcome

Welcome to the Bostick Bank message service.

5291 No mailbox

...has no answering service. Please try an alternative number. To transfer to the operator, press 0. For more options, press * .

6101 Enter ID

Please enter your extension number, followed by #.

6102 Invalid ID

You entered an invalid extension.

6103 Please try again

Please try again.

6104 Enter password

Please enter your password, followed by #.

6105 Invalid password

You entered an invalid password.

6106 You have no messages

You have no messages.

6107 You have messages

You have new messages.

6108 Message Center main menu - no messages

To send a message, press 2. To work with your greetings, press 3. For personal options, press 4. For call-handling and outgoing mail, press 5. To exit, press 7.

6109 Call handling options menu

To work with your ReachMe number, press 1. To work with your assistant number, press 2. To transfer to another number, press 3. To work with your outgoing mail, press 4. To work with your call-forward number, press 5. For further options, press 9. To return to the start, press 7.

6110 Multiple greetings

To return, press 7. Select a personal greeting number 1 to 5 [pause] Or for announcement-only greeting, press 6. For system greeting, press 8. For system announcement-only greeting, press 9.

6111 Is an e-mail

... is an e-mail

6112 New messages

New messages...

6113 Saved messages

Saved messages...

6114 New message number

New message number...

6115 Saved message number

Saved message number...

6116 Undeliverable message number

Undeliverable message number...

6117 No more messages

You have no more messages.

6118 Is a fax

... is a fax

6119 Expert listen menu

Next #. Listen 1. Save 2. Delete 3. Reply 4. Forward 5. Call sender 6. Date and time 8

6120 Expert listen fax menu

Next #. Listen 1. Delete 3. Forward 5. Date and time 8.

6121 Listen menu

To move to the next message, press #. To listen to the message, press 1. To save the message, press 2. To delete the message, press 3. To reply to the message, press 4. To forward this message to another recipient, press 5. To add the sender to your personal address book, press 6. To hear when the message was sent, press 8.

6122 Listen menu 2

To move to the next message, press #. To listen to the message, press 1. To reply to the message, press 4. To forward this message to another recipient, press 5. To add the sender to your personal address book, press 6. To hear when the message was sent, press 8.

6123 Send another menu

To send this message to another recipient, press 2. To return, press 7.

6124 List fax menu

To move to the next message, press #. To listen to the fax header, press 1. To delete the fax, press 3. To forward this fax to a fax machine, press 5. To hear when this fax was sent, press 8.

6125 Cannot delete message

This message cannot be deleted.

6126 Message deleted

The message has been deleted.

6127 Record greeting after tone

Please record the greeting after the tone. Press # to finish.

6128 Greeting saved

The greeting has been changed.

6129 List fax menu 2

To move to the next message, press #. To listen to the fax header, press 1. To forward this fax to a fax machine, press 5. To hear when this fax was sent, press 8.

6130 Record greeting menu

To listen to the greeting, press 1. To delete the greeting, press 3. To record the greeting, press 4. To hear your currently active greeting, press 9. To return, press 7.

6131 Enter new password

Please enter your new password, followed by #.

6132 Re-enter new password to verify

Please enter the new password again, followed by #, for verification.

6133 Not the same

Your two entries were not the same.

6134 Problems

Sorry, we are unable to continue with this function at present. If the problem persists please advise your system administrator.

6135 System greeting

The party you have called...

6136 Time-out

You have delayed too long with your input. You are being returned to the start. If you wish you may hang up at any time.

6137 Fax deleted

The fax has been deleted.

6138 Confirm password change

Your password has been changed.

6139 Record left message at tone

Please record your message after the tone. Press # to finish.

6140 Personal options menu 2

To select your voice message preferences, press 1. To record your audio name, press 2. To select language, press 3. To switch between standard and expert prompts, press 4. To return, press 7.

6141 Can't delete

You cannot delete this message until you have listened to it.

6142 Enter number for delivery

Please enter the number to which the message will be sent, followed by #. To dial by name, press #.

6143 Confirm message sent

Your message has been sent.

6144 Send options menu

To listen to the message before sending, press 1. To send the message now, press 2. To record the message again, press 4. To change the addressee, press 5. To add a comment to the message, press 6. To change the delivery options, press 8. To cancel this message, press 7.

6145 Confirm normal priority

Message priority has been set to normal.

6146 Confirm urgent

Message priority has been set to urgent.

6147 Confirm emergency

Message priority has been set to emergency.

6148 Confirm message canceled

Message canceled.

6149 Record message after the tone

Please record your message after the tone. Press # to finish.

6150 Send fax options menu

To listen to the fax header before sending, press 1. To send the fax now, press 2. To change the fax machine number, press 5. To cancel sending this fax, press 7.

6151 Sending fax canceled

Fax has not been sent.

6152 List e-mail menu 2

To listen to the e-mail, press 1. To move to the next message, press #. To forward this e-mail to a fax machine, press 5. To hear when the e-mail was sent, press 8.

6153 Received on

Received on...

6154 Default fax number

Please enter the fax machine number, followed by a #.

6155 Send e-mail options menu

To listen to the e-mail before sending, press 1. To send the e-mail now, press 2. To change the fax machine number, press 5. To stop this e-mail being sent, press 7.

6156 No mailbox

There is no mailbox for the person you called. Please call the general number for this location.

6157 Greeting selection menu

You can press 7 to return. Choose the number from 1 to 5 of the greeting to work with. Or choose the greeting as follows ... Announcement only greeting, press 6. ... Busy greeting, press 8. To hear your currently active greeting, press 9.

6158 Sending e-mail canceled

Your e-mail has not been sent.

6159 Check e-mail send addressee

Your e-mail will be sent to...

6160 Message priority

Message priority. For normal priority, press 1. For urgent priority, press 2. For emergency priority, press 3.

6161 Message privacy

Message privacy. For normal privacy, press 1. To make the message unforwardable, press 2.

6162 No audio name

There is no audio name for this extension.

6163 Record audio name after tone

Please record your audio name after the tone. Press # to finish.

6164 Confirm audio name saved

Your audio name has been changed.

6165 Audio name menu

To hear your audio name, press 1. To delete your audio name, press 3. To record your audio name, press 4. To return to the start, press 7.

6166 Transfer not permitted

Call transfer is not permitted at your location.

6167 Confirm audio name deleted

Your audio name has been deleted.

6168 Confirm greeting deleted

The greeting has been deleted.

6169 No greeting

No greeting exists. You must record a greeting before you can listen to it.

6170 From

...from...

6171 From external caller

From an external caller.

6172 From caller

...from caller...

6173 Check send addressee

Your message will be sent to...

6174 Check fax send addressee

Your fax will be sent to...

6175 Extension

Extension...

6176 Can't reply to external caller

You cannot reply to an external caller.

6177 Record reply after tone

Please record your reply after the tone. Press # to finish.

6178 Reply options menu

To hear the reply, press 1. To send the reply, press 2. To cancel the reply, press 3. To record the reply again, press 4. To change the attributes of the reply, press 8. To return, press 7.

6179 Deputy menu

To check your assistant number, press 1. To set assistant number, press 2. To cancel assistant number, press 3. To return to the start, press 7.

6180 Deputy options menu

To confirm your assistant number, press 2; otherwise press 7 to cancel.

6181 Enter deputy number

Please enter your assistant number, followed by #.

6182 Confirm reply sent

Your reply has been sent to...

6183 Reply canceled

Reply canceled.

6184 Call sender not permitted

Call transfer is not permitted at your location.

6185 List e-mail menu

To move to the next message, press #. To listen to the e-mail, press 1. To delete the e-mail, press 3. To forward this e-mail to a fax machine, press 5. To hear when this e-mail was sent, press 8.

6186 Confirm current greeting

The greeting you have currently selected is...

6187 Confirm e-mail sent

Your e-mail has been sent.

6188 Enter fax number

Please enter the number of the fax machine the e-mail will be sent to, followed by #.

6189 E-mail deleted

The e-mail has been deleted.

6190 Fax number selection

To work with your normal fax number, press 1. To work with your temporary fax number, press 2. To return, press 7.

6192 Can't forward message

This is a private message. It cannot be forwarded.

6193 Deputy not allowed

The assistant number you requested is not valid at your location.

6194 Deputy will be set to

Assistant number will be set to...

6195 Confirm deputy set

Assistant number has been set.

6196 Confirm fax number

Fax machine number will be set to...

6197 Confirm temporary fax number

Temporary fax machine number has been set to...

6198 Fax number confirmation

Fax machine number is set to...

6199 Record comment at tone

Please record your comment after the tone. Press # to finish.

6200 Confirm comment added

Your comment has been added to the message.

6201 Recipient already has message

The recipient already has this message. A second copy has not been sent.

6202 Mailbox in use

Your mailbox is already in use. Please call back later.

6203 Nothing was recorded

Nothing was recorded. Returning to the start.

6204 Left message options menu

To hear the message again, press 1. To save the message you have just recorded, press 2. To cancel the message and start again, press 3. To record the message again, press 4. To transfer to an assistant, press 5. To transfer to another number, press 6. To change the delivery options, press 8. To transfer to the operator, press 0. To change language, press 4. To sign on to Message Center, press 7. To disconnect, press 9.

6205 Confirm deputy canceled

Your assistant number has been canceled.

6206 No assistant

No assistant number exists

6207 Assistant number confirmation

Your assistant number is...

6208 Deputy number invalid

You cannot be connected to an assistant number for this extension.

6209 Transferring to operator

Please hold, you are being transferred to the operator.

6210 Another left message menu

You may hang up now if you wish. To record another message for the person you called, press 4. To transfer to an assistant, press 5. To transfer to another number, press 6. To transfer to the operator, press 0. To sign on to Message Center, press 7. To disconnect, press 9.

6211 Deputy not set

There is no assistant number for this extension. You may leave a message if you wish.

6212 Too many passwords

You have exceeded the maximum number of password attempts. You will now be disconnected.

6213 Deputy busy

Sorry, the assistant's line is busy. Please call back later, or you may leave a message if you wish.

6214 Deputy no reply

Sorry, there is no answer from the assistant number. Please call back later, or you may leave a message if you wish.

6215 Confirm disconnect subscriber

You will now be disconnected.

6216 Confirm disconnect caller

You will now be disconnected. Any messages you have left will be saved.

6217 Not available

...is not available. You may leave a message after the tone.

6218 Temporary fax number

Temporary fax machine number is set to ...

6219 Invalid password entry

Your entry is not valid. Passwords must be two to eight digits in length.

6220 Invalid send recipient

Your entry is not a valid destination.

6221 Back to original message

You may now continue to work with the original message.

6222 Message queue full

The message queue is full for the person you have called.

6223 Transfer to backup

Please hold while you are transferred to someone who can help you.

6224 This is your organization

Hello. This is the Message Center answering service.

6225 Fax options menu

To confirm the fax machine number, press 2. To cancel, press 7.

6226 Caller mailbox full

Your message queue is full. Please deal with your messages as a matter of urgency.

6227 Send-to mailbox full

The message queue for this extension is full. You cannot send a message at this time.

6228 Reply-to mailbox full

The sender's message queue is full. You cannot reply at this time.

6229 No fax number

No fax number exists.

6230 Operator busy

Sorry, the operator line is busy. Please call back later, or you may leave a message if you wish.

6231 Operator no reply

Sorry, there is no reply from the operator line. Please call back later, or you may leave a message if you wish.

6232 Confirm message saved

Your message has been saved.

6233 Delayed too long hang-up

You have delayed too long with your input. Thank you for calling. Good-bye.

6234 Confirm distribution list (when audio name present)

Your message will be sent to distribution list...

6235 Enter transfer number

Please enter the number you wish to transfer to, followed by #. [*1 second pause*] To dial by name begin with #.

6236 Please hold while transferred

Please hold while your call is transferred.

6237 Enter fax number

Please enter the number of the fax machine to which the fax will be sent, followed by #.

6238 Confirm fax sent

Your fax has been sent.

6239 User extension busy

The number you called is busy.

6240 User extension no reply

There is no reply from the number you called.

6241 User extension invalid

The number you requested is invalid.

6242 User transfer choice

To try again, press 2. To return to the start, press 7.

6243 Acknowledgment of receipt

Acknowledgement of receipt: for no acknowledgment press 1, for an acknowledgment press 2.

6244 Personal options menu

To work with your distribution lists press 1. Or press 2 for your e-mail preferences, 3 to change your password, 4 for notification schedules, 5 for notice board or 9 to work with personal options menu 2. To return, press 7.

6245 Message Center main menu

To receive your messages, press 1. To send a message, press 2. To work with your greetings, press 3. For personal options, press 4. For call-handling and outgoing mail, press 5. To exit, press 7.

6246 Enter forwarding number

Please enter the forwarding number, followed by #.

6247 Calls forwarded to

Your calls will be forwarded to...

6248 Confirm forward or not

To confirm forwarding, press 2. To cancel, press 7.

6249 Confirm forwarding set

Call forwarding has been set.

6250 Confirm forwarding canceled

Call forwarding has been canceled.

6251 Call-forwarding menu

To check your call forwarding number, press 1. To set your call-forwarding number now, press 2. To cancel call forwarding, press 3. To return to the start, press 7.

6252 Deputy transfer not permitted

Assistant numbers are not available at this location.

6253 Caller jumpout not permitted

Transfer to another number is not permitted at this location.

6254 Calls not forwarded

Your calls are not being forwarded.

6255 Calls are forwarded to

Your calls are being forwarded to...

6256 Please hold while connected

Please hold for a few moments while we connect you.

6257 Call forwarding disallowed

Call forwarding to this number is not allowed at your location.

6258 Sender not known

The sender's number is not known. We cannot transfer you.

6259 Confirm exit

To exit to the sign-on procedure, press 1. To disconnect, press 9. To return, press 7.

6260 Message to distribution

Your message will be sent to distribution list....

6261 Entering number

You are entering the number or name of the person you wish to contact.

6262 List menu

To review your distribution lists, press 1. To create a new list, press 2. To delete a list, press 3. To work with one of your lists, press 4. To return to the start, press 7.

6263 List summary

Total number of lists...

6264 They are

They are...

6265 List

...list...

6266 List member menu

To review the members, press 1. To add a member to the list, press 2. To delete a member, press 3. To return to the start, press 7.

6267 List number too big

A new list cannot be created. The maximum number of lists you may have is...

6268 Confirm list created

You have successfully created list number...

6269 Enter list ID

Please enter the ID of the list you wish to create, followed by #.

6270 Enter list ID to work with

Please enter the ID of the list you wish to work with, followed by #.

6271 Enter add member

Please enter the destination number of the member to add, followed by #.

6272 Confirm member deleted

Member deleted.

6273 Invalid transfer number

Your entry is not a valid number.

6274 Total members

Total members...

6275 Pressed * during transfer number entry

You are entering the number or name of the person you wish to contact and have just pressed *, the control key.

6276 Confirm member added

Member added.

6277 Enter member for deletion

Please enter the number of the member to be deleted, followed by #.

6278 No distribution lists

You have no distribution lists.

6279 Distribution list already exists

...already exists. A new list has not been created.

6280 Enter add first member

Please enter the destination number of the first member of the list, followed by #.

6281 With member

...with member...

6282 Member invalid

The list member you entered is not on the local file. Your message might not be transmitted successfully.

6283 List invalid

The list ID you entered is not valid. Please try again.

6284 List no members

This list has no members.

6285 End of list

End of list...

6286 Confirm list deleted

The list has been deleted.

6287 Enter list for deletion

Please enter the ID of the list to be deleted, followed by #. To return, press # by itself.

6288 List full

The list is full. You cannot add any more members. The maximum size of a distribution list is...

6289 Last member deleted

All members have been deleted. The list is now deleted.

6290 Transfer control function

For help, press 0. To continue what you were doing, press #. To cancel and start again, press *. For the Message Center main menu, press 7. To change language, press 8. To disconnect, press 9.

6291 Default announcement-only greeting

...has no answering service. Please try an alternative number, or if you wish you may press 0 to transfer to the operator, or press * for more options. *[pause for 10 seconds before going on-hook]*

6292 Future delivery

Delivery date. For immediate delivery, press 1. For future delivery, press 2.

6293 Enter delivery month

Please enter the month of delivery, followed by #.

6294 Enter delivery day

Please enter the day of the month of delivery, followed by #.

6295 Enter delivery hour

Please enter the hour of delivery, followed by #.

6296 Invalid delivery date

The date you specified is not valid. Please try again, or to cancel, press 7.

6297 Invalid delivery time

The delivery time you specified is not valid. The hour of delivery should be a number in the range 0 to 23. Please try again.

6298 Confirm delivery date

Your message will be delivered on...

6299 Confirm not private

Message privacy set to normal.

6300 Confirm private

Forwarding of this message by the recipient will not be allowed.

6301 Confirm no acknowledgment

No acknowledgment will be requested.

6302 Confirm acknowledgment

Acknowledgment will be requested.

6303 Emergency message

Emergency message number...

6304 Urgent message

Urgent message number...

6305 Message is acknowledgment

...is an acknowledgment of your message which was sent on...

6306 Personal options menu 2

Message preferences 1. Audio name 2. Language 3. Prompts 4. Return 7.

6307 Enter language code

Please enter the code for the language you require. For US English, press 1.
For French, press 2. For German, press 3. For Spanish, press 4. For UK
English, press 5. To keep the existing language, press 7.

6308 Language not available

The language you selected is not available.

6309 Language invalid

The language code you entered is not valid. Please try again or, to return,
press #.

6310 Language set

The language has been set.

6311 Outgoing messages

Outgoing messages.

6312 Outgoing message number

Outgoing message number...

6313 Is addressed to

...is addressed to...

6314 On

...on...

6315 Outgoing listen menu

To move to the next outgoing message, press #. To listen to the message
again, press 1. To delete the message, press 3. To listen to the header, press
8. To return, press 7.

6316 End of new messages

End of new messages.

6317 End of saved messages

End of saved messages.

6318 No outgoing message

You have no outgoing messages.

6319 No new messages

You have no new messages.

6320 No saved messages

You have no saved messages.

6321 No more outgoing

You have no more outgoing messages.

6322 End of outgoing

End of outgoing messages.

6323 Confirm standard prompts

Standard prompts have been set.

6324 Confirm expert prompts

Expert prompts have been set.

6325 Expert personal options

Distribution lists 1. E-mail 2. Password 3. Schedules 4. Notice board 5. Return 7. More options 9.

6326 Expert main menu

Receive 1. Send 2. Greeting 3. Personal 4. Call-handling 5. Exit 7.

6327 Expert main menu no messages

Send 2. Greetings 3. Personal 4. Call-handling 5. Exit 7.

6328 Expert send menu

Listen 1. Send 2. Re-record 4. Addressee 5. Comment 6. Attributes 8. Cancel 7.

6329 Expert fax send menu

Listen 1. Send 2. Addressee 5. Cancel 7.

6330 Expert reply menu

Listen 1. Send 2. Re-record 4. Delivery options 8. Cancel 3.

6331 Expert call-handling menu

ReachMe 1. Assistant 2. Transfer 3. Outmail 4. Call forwarding 5. Further options 9. Return 7.

6332 Transfer operator not permitted

Transfer to the operator is not possible at this location.

6333 Distribution takes time

Your message is being sent to a distribution list. This may take a little time. Please hold, or you can hang up if you wish.

6334 User transfer choice

To try again, press 9. To return to the start, press 7.

6335 Received today at

Received today at...

6336 No new messages notification

You have no new messages.

6337 Cannot reply to message

You cannot reply to this message.

6338 Message undeliverable

...has not been sent.

6339 Could not connect to AMIS receiver

It was rejected because we could not connect to the receiving system.

6340 AMIS message too large

It was rejected because the message was too long for the receiving system.

6341 No AMIS destination mailbox

It was rejected because the destination mailbox does not exist.

6342 AMIS destination box not receiving

It was rejected because the destination mailbox is not accepting messages.

6343 AMIS destination box full

It was rejected because the destination mailbox is full.

6344 AMIS technical problems

It was rejected because of technical problems in the network.

6345 Annotate menu

To add to the beginning, press 1. To add to the end, press 3.

6346 Matches found

The number of matches found was...

6347 For

For...

6348 Too many matches

This is too many. Please continue to enter more of the name or press # to start again.

6349 Press 1

...press 1.

6350 Press 2

...press 2.

6351 Press 3

...press 3.

6352 Press 4

...press 4.

6353 Press 5

...press 5.

6354 Press 6

...press 6.

6355 Press 7

...press 7.

6356 Press 8

...press 8.

6357 Press 9

...press 9.

6358 Pressed * during destination entry

You are entering a destination for your message and have just pressed *, the control key.

6359 Entering destination

You are entering a destination for the message you are about to send.

6360 Function not available

Sorry, this function is not available at this time.

6361 Distribution or destination menu

To send to a distribution list, press 1; otherwise, press 2.

6362 Enter distribution list ID

Please enter the ID of the distribution list, followed by #.

6363 Invalid distribution list

The distribution list you specified is not valid.

6364 Extra help

If you need help, press *0.

6365 Saved message summary 0

... no saved messages.

6366 Failed logon

There have been too many failed attempts to access your mailbox. It is now locked. Please contact your system administrator.

6367 Failed logon 1

There have been...

6368 Failed logon 2

...failed attempts to access your mailbox. Please contact your system administrator if you are concerned that this number is excessive.

6369 Password information

Your system manager has assigned you a temporary password. In addition to having a mailbox number, you will have a password. Your password is an important part of using the system; it allows you, and only you, to open your mailbox to get messages or to use other services of the system.

6370 Enter temporary password

Please enter your temporary password now, followed by #.

6371 Change password

Thank you. You should now change the temporary password to a new number that only you will know. Since this will be your secret password, it will prevent others from opening your mailbox and hearing your messages. You will be able to change your password as often as you want but, if you lose or forget your password, it cannot be retrieved by anyone. For this reason, make this password a number that is easy for you to remember and hard for others to guess.

6372 Enter password

Think of a password number now. Please enter the new password, then press #.

6373 Record audio name

At the tone, please say your first and last name then, press #.

6374 Your audio name

Your audio name sounds like this...

6375 Re-record audio name

If you would like to re-record your name please, press 4. If you are satisfied with the recording then press #.

6376 Greeting information

Thank you... you may now record a personal greeting or choose a system greeting.

6377 Record personal greeting

At the tone, please record your personal greeting. Press # when you have finished.

6378 Re-record personal greeting

If you would like to re-record your personal greeting, press 4. If you are satisfied, press #

6379 Message Center advice

Thank you. Here are some words of advice for Message Center users.

6380 Advice

Here are some final words of advice before transferring you to the system.

6381 Nothing recorded

Nothing was heard.

6382 The personal greeting recorded

The personal greeting you recorded was...

6383 System or personal greeting

Press 1 to choose the system greeting, or press 2 to record a personal greeting.

6384 Personal greeting information

Here is some good advice about the type of things you should consider in your personal greeting.

6385 System greeting chosen

You have chosen the default system greeting.

6386 The system greeting is

The system greeting would sound like this...

6387 Audio name information

Thank you. Now you need to record your audio name.

6388 New message summary 0

You have no new messages and...

6389 You have

You have...

6390 New messages

... new messages.

6391 New messages and

... new messages and...

6392 Optional prompt of the day for subscribers

[This is an optional prompt, recorded by the system administrator, which might be present or absent. If it is present, the contents of the prompt are played to all subscribers as they log on.]

6393 Saved messages

... saved messages.

6394 Disconnect with thanks

You will now be disconnected. Thank you for calling. Good-bye.

6395 Record distribution list name

Please record a name for the distribution list, followed by #.

6396 Technical problems

We are experiencing technical problems, please call back later.

6397 Confirm message saved

The message has been saved.

6398 New message

New message...

6399 Saved message

Saved message...

6401 Notifications and schedules menu

To toggle notification on or off, press 5. To work with schedules, press 4. To create a schedule, press 2. For schedule status, press 1.

6402 Notification on

Notification on.

6403 Notification off

Notification off.

6404 Enter schedule number

Please enter a schedule number from 1 to 4 or press 6 for a temporary schedule. To toggle notifications on or off, press 5. Press 7 to return.

6405 Work with schedule

To listen to the schedule, press 1. To update the schedule, press 2. To deactivate the schedule, press 3. To activate the schedule, press 4. To return to schedule main menu, press 7.

6406 Listen to schedule

Listen to schedule.

6407 Notify phone number

The phone number that you wish to be notified at is...

6408 Backup phone number

The backup phone number you wish to be notified at is...

6409 Schedule start time

The time you want this schedule to start is...

6410 Schedule stop time

The time you want this schedule to stop is...

6411 Notified all messages

You have requested to be notified of all messages.

6412 Notified urgent messages

You have requested to be notified of urgent messages.

6413 Notified emergency messages only

You have requested to be notified of emergency messages only.

6414 Days assigned

The days you have assigned to this schedule are...

6415 Create schedule

Create schedule.

6416 Enter notification phone number

Please enter the phone number to be notified at, followed by #.

6417 Enter backup phone number

Please enter the backup phone number to be notified at, followed by #, or press # on its own to have no backup number.

6418 Enter start time

Please enter the start time for this schedule, followed by #.

6419 Enter stop time

Please enter the stop time for this schedule, followed by #.

6420 Enter notification level

Please enter notification level. For all messages, press 1. For urgent messages, press 2. For emergency messages, press 3.

6421 Enter days

Please enter the days you wish to assign to this schedule. You may press # to finish. For the whole week, press 8. For Monday, press 1. For Tuesday, press 2. For Wednesday, press 3. For Thursday, press 4. For Friday, press 5. For Saturday, press 6. For Sunday, press 7.

6422 Schedule complete

Schedule complete. This schedule is currently inactive.

6423 Update schedule

Update schedule. To update the main number, press 1. To update backup phone number, press 2. To update the start time, press 3. To update the stop time, press 4. To update the notification level, press 5. To update the days assigned to this schedule, press 6. To return to schedule menu, press 7.

6424 Update confirmation

To update, press 1. To return without updating, press 2.

6425 Deactivate schedule

Deactivate schedule.

6426 Delete schedule confirmation

Are you sure you wish to delete this schedule? To return without deleting, press 2. To delete the schedule, press 3.

6427 Schedule deactivated

Schedule deactivated.

6428 Incorrect schedule number

You entered an incorrect schedule number. Please try again.

6429 Incorrect time

You entered an incorrect time. Please try again.

6430 Incorrect number

You entered an incorrect number. Please try again.

6431 Invalid key

You pressed an invalid key. Please try again.

6432 Outcall new messages

There are new messages for...

6433 Outcall notify prompt

To sign on to Message Center, press 1. If you wish to be called back in ten minutes, press 2. If you do not want to be notified at this time, press 3.

6434 Temporary schedule menu

To create temporary schedule, press 2. To delete temporary schedule, press 3.

6435 AM or PM

For a.m., press 1. For p.m., press 2.

6436 Work with schedule

To create the schedule, press 2. To return to schedule main menu, press 7.

6438 Schedules...

Schedule....

6439 No schedules active

No schedules active.

6440 Noon or midnight

For noon, press 1. For midnight, press 2.

6442 Too many days

You entered too many days.

6443 ...is active

...is active.

6445 Standard greeting

You have currently selected greeting number...

6446 Pre-greeting 'emergency' announcement

[Record the pre-greeting announcement here.]

6447 Post-greeting announcement

[Record the post-greeting announcement here.]

6448 Announcement only

...announcement only.

6449 System greeting

...the default system greeting.

6450 System announcement-only greeting

...the default system announcement-only greeting.

6451 ReachMe not permitted

ReachMe numbers are not available at this location.

6452 ReachMe busy

Sorry, the ReachMe number is busy. Please call back later, or if you prefer, you can leave a message.

6453 ReachMe no reply

Sorry, there is no answer from the ReachMe number. Please call back later, or if you prefer, you can leave a message.

6454 ReachMe no reply

You cannot be connected to a ReachMe number for this extension. If you prefer, you can leave a message.

6456 Distribution list add member failed

Sorry, the update failed. Please try a different member number.

6457 Send in German (used only with segments 6260 and 6234)

Send *[in German, to complete the German equivalents of segments 6260 and 6234]*

6458 Schedule already exists

The schedule already exists, putting you into update schedule instead of create schedule.

6459 Greeting does not exist

The greeting you have selected does not exist. You must now record that greeting or select a different greeting that does exist.

6461 Bad schedule

... is invalid and needs to be re-created. Please try again.

6462 List name restrictions

Sorry the list name must be not more than 4 digits, and must not begin with zero.

6463 Enter letters on keys

Enter letters of the last name using key 1 for Q and Z.

6464 PageMe not permitted

PageMe numbers are not available at this location.

6465 PageMe busy

Sorry, the PageMe number is busy. Please call back later, or if you prefer, you can leave a message.

6466 PageMe no reply

Sorry, there is no answer from the PageMe number. Please call back later, or if you prefer, you can leave a message.

6467 PageMe number invalid

You cannot be connected to a PageMe number for this extension.

6469 ReachMe not permitted

The ReachMe number you requested is not valid at your location.

6470 At (used in describing an external location)

...at...

6472 Message headers enabled

Message headers will be played in future.

6473 Message headers disabled

Message headers will not be played in future.

6474 Mailbox announce only

The recipient you specified is not currently receiving messages.

6476 Shedule activated

Schedule activated.

6477 Temporary override

Schedule 0, the temporary schedule, overrides all other schedules while active.

6478 Schedule does not exist

This schedule does not exist.

6479 Enter pager type

For a normal telephone, press 0. For a tone pager, press 1 or enter your pager type.

6480 Enter pager reference number

Please enter your pager reference number.

6481 Input help

You are entering data. If you wish to cancel, press #.

6482 Pager reference numbers

[This is a user prompt for pagers.]

6483 Pager type

This is a pager. The pager type is....

6484 Pager reference number

The pager reference number is...

6485 Access mailbox in use

If you know that no-one else is using your mailbox, and want to proceed, please press 9 now.

6486 Schedule does not exist

The schedule does not exist. You must create the schedule before you can work with it.

6487 Schedule input is invalid

Sorry, your input is not valid. The schedule update is being abandoned, and you are being returned to the schedule main menu

6488 Call handling options menu 2

To work with your normal fax number press 1, or press 2 for your temporary fax number, 3 for your normal pager number, 4 for your temporary pager number, 5 for your normal pager reference, 6 for your temporary pager reference, 8 for your operator number. Or press 7 to return.

6489 Call-forwarding menu

To work with your normal call-forwarding number press 1, or press 2 for your temporary number. To return, press 7.

6490 Assistant menu

To work with your normal assistant number, press 1, or press 2 for your temporary number. To return, press 7.

6491 ReachMe menu

To work with your normal ReachMe number, press 1. For your temporary number, press 2. To return, press 7.

6492 Message preferences menu

To set your play headers preference press 1, or press 2 for new message delete preference, 3 for autosave message preference, 4 for send message header preference, 5 for bilingual greeting preference, 6 for clock preference. To return, press 7.

6493 Default ReachMe number menu

To listen to your ReachMe number, press 1. To set your ReachMe number, press 2. To delete your ReachMe number, press 3. To return, press 7.

6494 Temporary ReachMe number menu

To listen to your temporary ReachMe number, press 1. To set your temporary ReachMe number, press 2. To delete your temporary ReachMe number, press 3. To return, press 7.

6495 Default assistant number menu

To listen to your assistant number, press 1. To set your assistant number, press 2. To delete your assistant number, press 3. To return, press 7.

6496 Temporary assistant number menu

To listen to your temporary assistant number, press 1. To set your temporary assistant number, press 2. To delete your temporary assistant number, press 3. To return, press 7.

6497 Default call-forwarding number Menu

To listen to your call-forwarding number, press 1. To set your call-forwarding number, press 2. To delete your call-forwarding number, press 3. To return, press 7.

6498 Temporary call-forwarding number menu

To listen to your temporary call-forwarding number, press 1. To set your temporary call-forwarding number, press 2. To delete your temporary call-forwarding number, press 3. To return, press 7.

6499 Default fax number menu

To listen to your fax number, press 1. To set your fax number, press 2. To delete your fax number, press 3. To return, press 7.

6500 Temporary fax number menu

To listen to your temporary fax number, press 1. To set your temporary fax number, press 2. To delete your temporary fax number, press 3. To return, press 7.

6501 Default pager number menu

To listen to your pager number, press 1. To set your pager number, press 2. To delete your pager number, press 3. To return, press 7.

6502 Temporary pager number menu

To listen to your temporary pager number, press 1. To set your temporary pager number, press 2. To delete your temporary pager number, press 3. To return, press 7.

6503 Default pager reference menu

To listen to your pager reference, press 1. To set your pager reference, press 2. To delete your pager reference, press 3. To return, press 7.

6504 Temporary pager reference menu

To listen to your temporary pager reference, press 1. To set your temporary pager reference, press 2. To delete your temporary pager reference, press 3. To return, press 7.

6505 Operator number menu

To listen to your operator number, press 1. To set your operator number, press 2. To delete your operator number, press 3. To return, press 7.

6506 Enter ReachMe number

Please enter your ReachMe number, followed by #.

6507 Enter temporary ReachMe number

Please enter your temporary ReachMe number, followed by #.

6509 Enter temporary assistant number

Please enter your temporary assistant number, followed by #.

6511 Enter temporary call-forwarding number

Please enter your temporary call-forwarding number, followed by #.

6512 Enter fax number

Please enter your fax number, followed by #.

6513 Enter temporary fax number

Please enter your temporary fax number, followed by #.

6514 Enter pager number

Please enter your pager number, followed by #.

6515 Enter temporary pager number

Please enter your temporary pager number, followed by #.

6516 Enter pager reference

Please enter your pager reference, followed by #.

6517 Enter temporary pager reference

Please enter your temporary pager reference, followed by #.

6518 Key pressed during header

You have pressed a key during the header. For help, press *0 .

6519 External location

External location.

6520 Help schedule

Help schedule.

6521 * pressed

You have just pressed *, the control key.

6524 Record greeting header

Please record your greeting header. Press # to finish.

6525 Outcall called back

You will now be disconnected and called back in ten minutes.

6526 Outcall disconnect

You will now be disconnected. You will not be notified of this message, but will be notified of any new messages.

6527 Stop must be later

Sorry, the start and stop times are not compatible. The stop time must always be later than the start time. Please try again.

6528 Start must be earlier

Sorry, the start and stop times are not compatible. The start time must always be earlier than the stop time. Please try again.

6529 Enter start time as 4 digits

Please enter the start time for this schedule as four digits.

6530 Enter stop time as 4 digits

Please enter the stop time for this schedule as four digits.

6531 New message warning 1

You have 1 new message.

6532 New message warning 2

You have 2 new messages.

6533 New message warning 3

You have 3 new messages.

6534 New message warning 4

You have 4 new messages.

- 6535 New message warning 5**
You have 5 new messages.
- 6536 New message warning 6**
You have 6 new messages.
- 6537 New message warning 7**
You have 7 new messages.
- 6538 New message warning 8**
You have 8 new messages.
- 6539 New message warning 9**
You have 9 new messages.
- 6540 New message warning 10**
You have 10 new messages.
- 6541 New message warning 11**
You have 11 new messages.
- 6542 New message warning 12**
You have 12 new messages.
- 6543 New message warning 13**
You have 13 new messages.
- 6544 New message warning 14**
You have 14 new messages.
- 6545 New message warning 15**
You have 15 new messages.
- 6546 New message warning 16**
You have 16 new messages.
- 6547 New message warning 17**
You have 17 new messages.
- 6548 New message warning 18**
You have 18 new messages.
- 6549 New message warning 19**
You have 19 new messages.
- 6550 New message warning 20**
You have 20 new messages.
- 6551 Saved message summary 1**
... 1 saved message.
- 6552 Saved message summary 2**
... 2 saved messages.
- 6553 Saved message summary 3**
... 3 saved messages.
- 6554 Saved message summary 4**
... 4 saved messages.

- 6555 Saved message summary 5**
... 5 saved messages.
- 6556 Saved message summary 6**
... 6 saved messages.
- 6557 Saved message summary 7**
... 7 saved messages.
- 6558 Saved message summary 8**
... 8 saved messages.
- 6559 Saved message summary 9**
... 9 saved messages.
- 6560 Saved message summary 10**
... 10 saved messages.
- 6561 Saved message summary 11**
... 11 saved messages.
- 6562 Saved message summary 12**
... 12 saved messages.
- 6563 Saved message summary 13**
... 13 saved messages.
- 6564 Saved message summary 14**
... 14 saved messages.
- 6565 Saved message summary 15**
... 15 saved messages.
- 6566 Saved message summary 16**
... 16 saved messages.
- 6567 Saved message summary 17**
... 17 saved messages.
- 6568 Saved message summary 18**
... 18 saved messages.
- 6569 Saved message summary 19**
... 19 saved messages.
- 6570 Saved message summary 20**
... 20 saved messages.
- 6571 New message summary 1**
You have 1 new message and...
- 6572 New message summary 2**
You have 2 new messages and...
- 6573 New message summary 3**
You have 3 new messages and...
- 6574 New message summary 4**
You have 4 new messages and...

6575 New message summary 5

You have 5 new messages and...

6576 New message summary 6

You have 6 new messages and...

6577 New message summary 7

You have 7 new messages and...

6578 New message summary 8

You have 8 new messages and...

6579 New message summary 9

You have 9 new messages and...

6580 New message summary 10

You have 10 new messages and...

6581 New message summary 11

You have 11 new messages and...

6582 New message summary 12

You have 12 new messages and...

6583 New message summary 13

You have 13 new messages and...

6584 New message summary 14

You have 14 new messages and...

6585 New message summary 15

You have 15 new messages and...

6586 New message summary 16

You have 16 new messages and...

6587 New message summary 17

You have 17 new messages and...

6588 New message summary 18

You have 18 new messages and...

6589 New message summary 19

You have 19 new messages and...

6590 New message summary 20

You have 20 new messages and...

6591 Remote default system greeting - first part

If you would like to leave a message for the person you have called...

6592 Remote default system greeting - second part

Please speak after the tone.

6593 New password failed location checks

The password you entered does not meet location standards. Please try again with a different password.

6594 Password expired

Your password has expired. You must change it now.

6595 Announcement-only 2

...announcement-only 2.

6596 Confirm greetings successfully made bilingual

Your bilingual greetings have been successfully set up.

6597 Bilingual greetings failed

I'm sorry, we are unable to set your bilingual greetings. Please check you have recorded all the necessary greetings and try again.

6598 And

...and...

6600 Enter operator number

Please enter your operator number, followed by #.

6601 ReachMe number is

Your ReachMe number is set to...

6602 Temporary ReachMe number is

Your temporary ReachMe number is set to...

6603 Assistant number is

Your assistant number is set to...

6604 Temporary assistant number is

Your temporary assistant number is set to...

6605 Call-forwarding number is

Your call-forwarding number is set to...

6606 Temporary call-forwarding number is

Your temporary call-forwarding number is set to...

6607 Fax number is

Your fax number is set to...

6608 Temporary fax number is

Your temporary fax number is set to...

6609 Pager number is

Your pager number is set to...

6610 Temporary pager number is

Your temporary pager number is set to...

6611 Pager reference is

Your pager reference is set to...

6612 Temporary pager reference is

Your temporary pager reference is set to...

6613 Operator number is

Your operator number is set to...

- 6614 ReachMe number deleted**
Your ReachMe number has been deleted.
- 6615 Temporary ReachMe number deleted**
Your temporary ReachMe number has been deleted.
- 6617 Temporary assistant number deleted**
Your temporary assistant number has been deleted.
- 6619 Temporary call-forwarding number deleted**
Your temporary call-forwarding number has been deleted.
- 6620 Fax number deleted**
Your fax number has been deleted.
- 6621 Temporary fax number deleted**
Your temporary fax number has been deleted.
- 6622 Pager number deleted**
Your pager number has been deleted.
- 6623 Temporary pager number deleted**
Your temporary pager number has been deleted.
- 6624 Pager reference deleted**
Your pager reference has been deleted.
- 6625 Temporary pager reference deleted**
Your temporary pager reference has been deleted.
- 6626 Operator number deleted**
Your operator number has been deleted.
- 6627 ReachMe number not set**
Your ReachMe number has not been set.
- 6628 Temporary ReachMe number not set**
Your temporary ReachMe number has not been set.
- 6629 Assistant number not set**
Your assistant number has not been set.
- 6630 Temporary assistant number not set**
Your temporary assistant number has not been set.
- 6632 Temporary call-forwarding number not set**
Your temporary call-forwarding number has not been set.
- 6633 Fax number not set**
Your fax number has not been set.
- 6634 Temporary fax number not set**
Your temporary fax number has not been set.
- 6635 Pager number not set**
Your pager number has not been set.
- 6636 Temporary pager number not set**
Your temporary pager number has not been set.

6637 Pager reference not set

Your pager reference has not been set.

6638 Temporary pager reference not set

Your temporary pager reference has not been set.

6639 Operator number not set

Your operator number has not been set.

6640 Play headers on

You have chosen to play message headers before each message.

6641 Play headers off

You have chosen not to play message headers before each message.

6642 Play headers off menu

To choose not to play message headers before each message, press 2. Press 7 to cancel.

6643 New message delete on

You can delete new messages without listening to the whole message.

6644 New message delete off

You cannot delete new messages without listening to the whole message.

6645 New message delete off menu

To disable new message deletion, press 2. Press 7 to cancel.

6646 Autosave message on

New messages will be automatically saved.

6647 Autosave message off

New messages will not be automatically saved.

6648 Autosave message off menu

To choose not to save new messages automatically, press 2. Press 7 to cancel.

6649 Send message header before

You have chosen to specify the message address before recording the message.

6650 Send message header after

You have chosen to specify the message address after recording the message.

6651 Send message header menu

To specify the message address after recording the message, press 2. Press 7 to cancel.

6652 Bilingual greetings on

Bilingual greetings on.

6653 Bilingual greetings off

Bilingual greetings off.

6654 Bilingual greetings off menu

To disable bilingual greetings, press 2. Press 7 to cancel.

6655 Clock preference 12

You have chosen to use the 12-hour clock.

6656 Clock preference 24

You have chosen to use the 24-hour clock.

6657 Clock preference 24 menu

To use the 24-hour clock, press 2. Press 7 to cancel.

6658 E-mail menu

To set your message destination preferences, press 1. To set your message destination type, press 2. To return, press 7.

6659 Message destination preference menu

To select a message destination of local, press 1. Press 2 for remote, 3 for local and remote. To return, press 7.

6660 Sync type menu

To select a type of All, press 1. Press 2 for Nolink, 3 for Voicemail to E-mail. To return, press 7.

6661 Message destination type menu

To select a type of .wav, press 1. Press 2 for .au, 3 for DT/6, 4 for DT/6 GSM, 5 for 32KADPCM. To return, press 7.

6662 Sync user off menu

To disable synchronization, press 2. Press 7 to cancel.

6663 Sync user on

Synchronization has been enabled.

6664 Sync user off

Synchronization has been disabled.

6665 ReachMe options menu

To confirm your ReachMe number, press 2. To cancel, press 7.

6666 Confirm ReachMe set

ReachMe number has been set.

6667 Confirm temporary ReachMe set

Temporary ReachMe number has been set.

6668 ReachMe will be set to

ReachMe number will be set to...

6669 Temporary ReachMe will be set to

Temporary ReachMe number will be set to...

6670 Play headers on menu

To play message headers before each message, press 2. Press 7 to cancel.

6671 New message delete on menu

To enable new message deletion, press 2. Press 7 to cancel.

6672 Autosave message off menu

To save new messages automatically, press 2. Press 7 to cancel.

6673 Send message before header menu

To specify the message address before recording the message, press 2. Press 7 to cancel.

6674 Bilingual greetings on menu

To enable bilingual greetings, press 2. Press 7 to cancel.

6675 Clock preference 12 menu

To use the 12-hour clock, press 2. Press 7 to cancel.

6676 Sync user on menu

To enable synchronization, press 2. Press 7 to cancel.

6677 Sync type All

Synchronization type has been set to All.

6678 Sync type Nolink

Synchronization type has been set to Nolink.

6679 Sync type Voice to E-mail

Synchronization type has been set to Voice to E-mail.

6680 Message destination preference local

Message destination preference has been set to local.

6681 Message destination preference remote

Message destination preference has been set to remote.

6682 Message destination preference local and remote

Message destination preference has been set to both local and remote.

6683 Message destination type .wav

Message destination type has been set to .wav.

6684 Message destination type .au

Message destination type has been set to .au.

6685 Message destination type 32KADPCM

Message destination type has been set to 32KADPCM.

6686 Message destination type DT/6

Message destination type has been set to DT/6 elements.

6687 Message destination type DT/6 GSM

Message destination type has been set to DT/6 GSM.

6688 Fax number not allowed

The fax number you requested is not valid at your location.

6689 Confirm fax number set

Fax number has been set.

6690 Confirm temporary fax number set

Temporary fax number has been set.

6691 Pager number options menu

To confirm the pager number, press 2. To cancel, press 7.

6692 Pager reference options menu

To confirm the pager reference, press 2. To cancel, press 7.

6693 Operator options menu

To confirm the operator number, press 2. To cancel, press 7.

6694 Pager number not allowed

The pager number you requested is not valid at your location.

6695 Confirm pager number set

Pager number has been set.

6696 Confirm temporary pager number set

Temporary pager number has been set.

6697 Confirm pager reference set

Pager reference has been set.

6698 Confirm temporary pager reference set

Temporary pager reference has been set.

6699 Pager will be set to

Pager number will be set to...

6700 Temporary pager will be set to

Temporary pager number will be set to...

6701 Pager reference will be set to

Pager reference will be set to...

6702 Temporary pager reference will be set to

Temporary pager reference will be set to...

6703 Operator number will be set to

Operator number will be set to...

6704 Temporary deputy number will be set to

Temporary deputy number will be set to...

6705 Confirm temporary deputy set

Temporary assistant number has been set.

6706 Call-forwarding number will be set to

Call-forwarding number will be set to...

6707 Temporary call-forwarding number will be set to

Temporary call-forwarding number will be set to...

6708 Synchronization not available

E-mail and voice mail synchronization is not available at this location.

6709 Entering pager number

You are entering your default pager number.

6710 Entering temporary pager number

You are entering your temporary pager number.

6711 Entering pager reference

You are entering your default pager reference number.

6712 Entering temporary pager reference

You are entering your temporary pager reference number.

6713 Entering assistant number

You are entering your default assistant number.

6714 Entering temporary assistant number

You are entering your temporary assistant number.

6715 Entering ReachMe number

You are entering your default ReachMe number.

6716 Entering temporary ReachMe number

You are entering your temporary ReachMe number.

6717 Entering fax number

You are entering your default fax number.

6718 Entering temporary fax number

You are entering your temporary fax number.

6719 Entering operator number

You are entering your default operator number.

6720 Entering call-forwarding number

You are entering your default call-forwarding number.

6721 Entering temporary call-forwarding number

You are entering your temporary call-forwarding number.

6722 Error sending fax

There was an error processing this fax. It has not been sent. Please wait and try again later.

6723 New greeting header menu

To listen to the greeting header, press 1, or press 3 to delete the greeting header, 4 to record the greeting header, 5 to select a greeting, 6 to work with your greetings, or 9 to hear your currently active greeting. To return, press 7.

6724 New notice board menu

To create a notice board, press 2. To return, press 7.

6725 Notice board menu

To listen to the notice board, press 1. To update, press 2. To delete, press 3. To return, press 7.

6726 Record notice board

Please record the notice board after the tone. Press # to finish.

6727 Notice board saved

The notice has been saved.

6728 No notice board

The notice board is empty.

6729 Confirm notice board deleted

The notice board has been deleted.

6730 Expert listen menu 2

Next #. Listen 1. Reply 4. Forward 5. Call sender 6. Date and time 8.

6731 Confirm operator number set

Operator number has been set.

6732 Operator not allowed

The operator number you requested is not allowed at your location.

6733 Cannot connect to fax

There was an error trying to connect you to the fax number. Please try again later. You are being disconnected.

6734 No fax number

There is no fax support for this number. Please try a different number. You are being disconnected.

6735 ReachMe not set

There is no ReachMe number for this extension. You may leave a message if you wish.

6736 PageMe not set

There is no PageMe number for this extension. You may leave a message if you wish.

6737 Fax option

To send this message to a fax machine, press 9.

6738 Expert fax option

Fax 9.

6739 Fax attachment

This message is a fax.

6740 No fax support

There is no fax support at this location.

6741 Expert listen fax menu

Next #. Listen 1. Delete 3. Reply 4. Forward 5. Call sender 6. Date and time 8. Fax 9.

6742 Expert listen fax menu

Next #. Listen 1. Reply 4. Forward 5. Call sender 6. Date and time 8. Fax 9.

Note: This menu applies when the subscriber interrupts a new message.

6743 Listen fax menu

To move to the next message, press #. To listen to the message, press 1. To delete the message, press 3. To reply to the message, press 4. To forward this message to another number, press 5. To call the person who sent this message, press 6. To hear when the message was sent, press 8. To send this message to a fax machine, press 9.

6744 Listen fax menu

To move to the next message, press #. To listen to the message, press 1. To reply to the message, press 4. To forward this message to another number,

IMC voice directory

press 5. To call the person who sent this message, press 6. To hear when the message was sent, press 8. To send this message to a fax machine, press 9.

Note: This menu applies when the subscriber interrupts a new message.

6745 Enter fax number

Please enter the fax machine number followed by #, or for immediate delivery press *.

6746 No fax support for message forwarding destination

There is no fax support for this number.

6751 Inactive schedule - activation instructions

To listen to schedule, press 1. To update schedule, press 2. To activate the schedule, press 4. To return to schedule main menu, press 7.

6752 Active schedule - deactivation instructions

To listen to schedule, press 1. To update schedule, press 2. To deactivate the schedule, press 3. To return to schedule main menu, press 7.

6761 No tones detected

No tones have been detected from your telephone keypad.

6762 Reporting restriction to touch-tone phones

This system recognizes input from touch-tone phones only.

6763 Touch-tone phone confirmation request

Please press # now to confirm that you have a touch-tone phone.

6764 Touch-tone phone confirmation phrase

...you have a touch-tone phone.

6765 Reporting a non-tone phone

You do not appear to have a touch-tone phone.

6766 Advise to use touch-tone phone

Please call again from a touch-tone phone to access Message Center.

6767 Advise to use touch-tone phone or wait for operator

Please hang up and call again from a touch-tone phone to access Message Center, or wait for a few seconds and you will be transferred to the operator.

7108 Main menu header

Main menu.

7109 Call handling help header

Call-handling menu.

7110 Select greetings help header

Select greetings menu.

7111 Select fax menu

Select fax menu.

7121 Receive message help header

Receive message menu.

7123 Send to another help header

Send to another menu.

7130 Greetings help header

Record greetings menu.

7140 Personal options help 2 header

Personal options menu 2.

7144 Send options help header

Send a message menu.

7145 Send fax options help header

Send a fax menu.

7146 Send e-mail options help header

Send an e-mail menu.

7157 Work with greetings help header

Work with greetings menu.

7158 Fax numbers menu

Work with fax numbers menu.

7160 Message attributes help header

Message attributes menu.

7165 Audio name help header

Audio name menu.

7178 Send reply help header

Send reply menu.

7179 Assistant number help menu

Assistant number help menu.

7180 Confirm deputy help header

Confirm assistant number menu.

7181 Confirm fax number menu

Confirm fax number menu.

7225 Fax options help header

Fax options help menu.

7242 Call transfer help header

Call transfer menu.

7244 Personal options help header

Personal options menu.

7245 Main menu help header

Main menu.

7246 Personal options menu 2

Personal options menu 2.

7248 Confirmation of call referral help header

Confirmation of call referral menu.

7251 Call referral menu

Call referral menu.

7259 Confirmation of exit help header

Confirmation of exit menu.

7262 Distribution list help header

Distribution list menu.

7266 Work on distribution list help header

Work on distribution list menu.

7315 Outgoing messages help header

Outgoing messages menu.

7345 Message comment help header

Message comment menu.

7361 Distribution list or destination help header

Distribution list or destination menu.

7401 Schedule main menu

Schedule main menu.

7404 Schedule number menu

Enter schedule number menu

7405 Schedule menu header

Schedule menu.

7420 Notification level menu header

Notification level menu.

7423 Update schedule menu header

Update schedule menu.

7424 Update

Update.

7426 Delete schedule menu

Delete schedule menu.

7434 Temporary schedule menu

Temporary schedule menu.

7435 AM or PM menu

a.m. or p.m. menu.

7440 Noon or midnight menu header

Noon or midnight menu.

7485 Mailbox in use menu header

Mailbox in use menu.

7488 Call-handling options menu 2 header

Call-handling options menu 2.

7489 Call-forwarding menu header

Call-forwarding menu.

- 7490 Assistant menu header**
Assistant menu.
- 7491 ReachMe menu header**
ReachMe menu.
- 7492 Message preferences menu header**
Message preferences menu.
- 7493 Default ReachMe menu header**
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- 7494 Temporary ReachMe menu header**
Temporary ReachMe menu.
- 7495 Default assistant menu header**
Default assistant menu.
- 7496 Temporary assistant menu header**
Temporary assistant menu.
- 7497 Default call-forwarding menu header**
Default call-forwarding menu.
- 7498 Temporary call-forwarding menu header**
Temporary call-forwarding menu.
- 7499 Default fax menu header**
Default fax menu.
- 7500 Temporary fax menu header**
Temporary fax menu.
- 7501 Default pager menu header**
Default pager menu.
- 7502 Temporary pager menu header**
Temporary pager menu.
- 7503 Default pager reference menu header**
Default pager reference menu.
- 7504 Temporary pager reference menu header**
Temporary pager reference menu.
- 7505 Operator number menu header**
Operator number menu.
- 7642 Play headers off menu header**
Play headers off menu.
- 7645 New message delete menu header**
New message delete menu.
- 7648 Autosave message off menu header**
Autosave message off menu.
- 7651 Send message header menu header**
Send message header menu.

7654 Bilingual greetings off menu header

Bilingual greetings off menu.

7657 Clock preference 24 menu header

Clock preference 24 menu.

7658 E-mail menu header

E-mail menu.

7659 Message destination preference menu header

Message destination preference menu.

7660 Sync type menu header

Sync type menu.

7661 Message destination type menu header

Message destination type menu.

7662 Sync user off menu header

Sync user off menu.

7665 ReachMe options menu header

ReachMe options menu.

7670 Play headers on menu header

Play headers on menu.

7671 New delete menu header

New message delete menu.

7672 Autosave message menu

Autosave message menu

7673 Send message before menu header

Send message before menu.

7674 Bilingual greetings on menu header

Bilingual greetings on menu.

7675 Clock preference 12 menu header

Clock preference 12 menu.

7676 Sync user on menu header

Sync user on menu.

7691 Pager number options menu header

Pager number options menu.

7692 Pager reference options menu header

Pager reference options menu.

7693 Operator number options menu header

Operator number options menu.

7723 New greeting header menu header

New greeting header menu.

7724 New notice board menu header

New notice board menu.

7725 Notice board menu header

Notice board menu.

7996 Listening to a message menu header

Listening to a message.

7997 Listening to an outmail menu

Listening to an outmail message.

7999 Stop key pressed

Stop key pressed.

8000 Left message options menu - standard

To hear the message again, press 1. To save the message you have just recorded, press 2. To cancel the message and start again, press 3. To record the message again, press 4. To transfer to an assistant, press 5. To transfer to another number, press 6. To change the attributes of your message, press 8. To transfer to the operator, press 0.

8001 Left message options menu - help

You have just finished recording a message and may now take any one of the following actions...

8002 Call answering control menu

You also have the following control functions available via the * key: To sign on to Message Center, press * 7. To select language, press * 8. To disconnect, press * 9. To cancel and return, press * *. To carry on from where you left off, press * #. For help, press * 0.

8003 Post left message save options menu - standard

You may hang up now if you wish. To record another message for the person you called, press 4. To transfer to an assistant, press 5. To transfer to another number, press 6. To transfer to the operator, press 0.

8004 Post left message save options menu - help

You have just saved your message in the mailbox of the person you called. You may now take one of the following actions...

8005 Greeting interruption help

You have just interrupted a greeting by pressing *, the control key. To return to the greeting, press 1. To begin recording immediately, press #. To transfer to an assistant, press 5. To transfer to another number, press 6. To transfer to the operator, press 0.

8006 Record interruption help

You have just stopped recording by pressing *, the control key. To continue, press #. To transfer to an assistant, press 5. To transfer to another number, press 6. To transfer to the operator, press 0.

8007 Invalid transfer number - help

You have just pressed *, the control key. Prior to this you attempted to transfer to an invalid number.

8008 Stopped transfer number entry - help

You have just interrupted your data entry by pressing *, the control key. You can now enter your data again.

8009 Interrupted announcement-only greeting - help

You have just interrupted a greeting by pressing *, the control key. To return to the greeting, press 1. To transfer to an assistant, press 5. To transfer to another number, press 6. To transfer to the operator, press 0.

8010 Control function

For help, press 0. To carry on with what you were doing, press #. To cancel what you were doing, press *. To return to the starting menu, press 7. To change language, press 8. To disconnect, press 9.

8011 Control function - before * is pressed

For help, press *0. To carry on with what you were doing, press *#. To cancel what you were doing, press **. To change language, press *8. To disconnect, press *9. To return to the starting menu, press *7.

8012 Call-answering control function

For help, press 0. To carry on with what you were doing, press #. To cancel and start again, press *. To sign on to Message Center, press 7. To change language, press 8. To disconnect, press 9.

8013 Remote greeting interruption help

You have just interrupted a greeting by pressing *, the control key. To return to the greeting, press 1. To begin recording immediately, press #. To transfer to another number, press 6. To transfer to the operator, press 0.

8014 Pause during playback

[pause] To continue, press # .

8108 Message Center main menu - no messages - extended

To send a message, press 2. To work with your greetings, press 3. For personal options, press 4. For call-handling and outgoing mail, press 5.

8109 Call-handling options menu - extended

To work with your ReachMe number, press 1. To work with your assistant number, press 2. To transfer to another number, press 3. To work with your outgoing mail, press 4. To work with your call-forward number, press 5. For further options, press 9. To return to the start, press 7.

8110 Multiple greetings - extended

Select a personal greeting number 1 to 5. [Pause.] Or for announcement-only greeting, press 6. For system greeting, press 8. For system announcement-only greeting, press 9. To return, press 7.

8111 Fax number menu

To work with your normal fax number, press 1. To work with your temporary fax number, press 2. To return, press 7.

8121 Listen menu - extended

To move to the next message, press #. To listen to the message, press 1. To delete the message, press 3. To reply to the message, press 4. To forward this message to another number, press 5. To call the person who sent this message, press 6. To hear when the message was sent, press 8.

8123 Send another menu - extended

To send this message to another recipient, press 2. To return, press 7

8124 List fax menu - extended

To move to the next message, press #. To listen to the fax header, press 1. To delete the fax, press 3. To forward this fax to a fax machine, press 5. To hear when this fax was sent, press 8.

8130 Record greeting menu - extended

To listen to the greeting, press 1. To delete the greeting, press 3. To record the greeting, press 4. To hear your currently active greeting, press 9. To return, press 7.

8140 Personal options menu 2 - extended

To select your voice message preferences, press 1. To record your audio name, press 2. To select language, press 3. To switch between standard and expert prompts, press 4. To return, press 7.

8144 Send options menu - extended

To listen to the message before sending, press 1. To send the message now, press 2. To record the message again, press 4. To change the addressee, press 5. To add a comment to the message, press 6. To change the message attributes, press 8. To cancel this message, press 7.

8145 Send fax options menu - extended

To listen to the fax header before sending, press 1. To send the fax now, press 2. To change the fax machine number, press 5. To cancel sending this fax, press 7.

8155 Send e-mail options menu - extended

To listen to the e-mail before sending, press 1. To send the e-mail now, press 2. To send the e-mail to a different person, press 5. To cancel sending this e-mail, press 7.

8157 Greeting selection menu - extended

[Quarter-second pause.] Choose the number from 1 to 5 of the greeting to work with. Or choose the greeting as follows: announcement-only greeting press 6; busy greeting press 8. To hear your currently active greeting press 9. To return, press 7.

8158 Select greeting menu

To hear the fax number, press 1. To change the fax number, press 2. To return, press 7.

8160 Message priority - extended

Message priority. For normal priority, press 1. For urgent priority, press 2. For emergency priority, press 3.

8161 Message privacy - extended

Message privacy. For normal privacy, press 1. To make the message unforwardable, press 2.

8165 Audio name menu - extended

To hear your audio name, press 1. To delete your audio name, press 3. To record your audio name, press 4. To return to the start, press 7.

8178 Reply options menu - extended

To hear the reply, press 1. To send the reply, press 2. To cancel the reply, press 3. To record the reply again, press 4. To change the attributes of the reply, press 8. To return, press 7.

8179 Assistant number menu

To set assistant number, press 2. To cancel assistant number, press 3. To check your assistant number, press 1. To return to the start, press 7.

8180 Deputy options menu - extended

To confirm your assistant number, press 2; otherwise, press 7 to cancel.

8181 Confirm fax number

To confirm the fax machine number, press 2; otherwise, press 7 to cancel.

8185 List e-mail menu - extended

To move to the next message, press #. To listen to the e-mail, press 1. To delete the e-mail, press 3. To forward this e-mail to a fax machine, press 5. To hear when this e-mail was sent, press 8.

8225 Fax options menu - extended

To confirm the fax machine number, press 2. To cancel, press 7.

8242 User transfer choice - extended

To try again, press 2. To return to the start, press 7

8243 Acknowledgment of receipt - extended

Acknowledgment of receipt: for no acknowledgment press 1, for an acknowledgment press 2.

8244 Personal options menu - extended

To work with your distribution lists press 1. For your e-mail preferences, press 2. To change your password, press 3. For notification schedules, press 4. For notice board, press 5. To work with your personal options menu 2, press 9. To return press 7.

8245 Main menu - extended

To receive your messages, press 1. To send a message, press 2. To work with your greetings, press 3. For personal options, press 4. For call-handling and outgoing mail, press 5. To exit, press 7.

8246 Fax number option

To work with your fax numbers, press 1.

8248 Confirm forward or not - extended

To confirm forwarding, press 2. To cancel, press 7.

8251 Call-forwarding menu

To check your call forwarding number press 1. To set your call-forwarding number now, press 2. To cancel call forwarding, press 3. To return to the start, press 7.

8259 Confirm exit - extended

To exit to the sign-on procedure, press 1. To disconnect, press 9. To return, press 7.

8262 List menu - extended

To review your distribution lists, press 1. To create a new list, press 2. To delete a list, press 3. To work with one of your lists, press 4. To return to the start, press 7.

8266 List member menu - extended

To review the members, press 1. To add a member to the list, press 2. To delete a member, press 3. To return to the start, press 7.

8292 Future delivery - extended

Delivery date. For immediate delivery, press 1. For future delivery, press 2.

8315 Outgoing listen menu - extended

To move to the next outgoing message, press #. To listen to the message again, press 1. To delete the message, press 3. To listen to the header, press 8. To return, press 7.

8345 Annotate menu - extended

To add to the beginning, press 1. To add to the end, press 3.

8361 Distribution or destination menu - extended

To send to a distribution list, press 1; otherwise, press 2.

8401 Notifications and schedules menu

To toggle notification on or off, press 5. To work with schedules, press 4. To create a schedule, press 2. For schedule status, press 1.

8404 Enter schedule number extended help

Please enter a schedule number from 1 to 4, or press 6 for a temporary schedule. To toggle notifications on or off, press 5. Press 7 to return.

8405 Work with schedule - extended

To listen to the schedule, press 1. To update the schedule, press 2. To deactivate the schedule, press 3. To activate the schedule, press 4. To return to schedule main menu, press 7.

8420 Enter notification level - extended

Please enter notification level. For all messages, press 1. For urgent messages, press 2. For emergency messages, press 3.

8423 Update schedule - extended

Update schedule. To update the main number, press 1. To update backup phone number, press 2. To update the start time, press 3. To update the stop time, press 4. To update the notification level, press 5. To update the days assigned to this schedule, press 6. To return to schedule menu, press 7.

8424 Update confirmation - extended

To update, press 1. To return without updating, press 2.

8426 Confirm schedule deletion

Are you sure you wish to delete this schedule? To return without deleting, press 2. To delete the schedule, press 3.

8434 Temporary schedule menu

To create a temporary schedule, press 2. To delete the temporary schedule, press 3.

8435 AM or PM - extended

For a.m. press 1. For p.m. press 2.

8440 Noon or midnight - extended

For noon, press 1. For midnight, press 2.

8488 Call-handling options menu 2 - extended

To work with your normal fax number press 1. For your temporary fax number, press 2. For your normal pager number, press 3. For your temporary pager number, press 4. For your normal pager reference, press 5. For your temporary pager reference, press 6. For your operator number, press 8. To return, press 7.

8489 Call-forwarding menu - extended

To work with your normal call-forwarding number press 1, or press 2 for your temporary number. To return press 7.

8490 Assistant menu - extended

To work with your normal assistant number press 1, or press 2 for your temporary number. To return press 7.

8491 ReachMe menu - extended

To work with your normal ReachMe number, press 1, or press 2 for your temporary number. To return press 7.

8492 Message preferences menu - extended

To set your play headers preference press 1, or press 2 for new message delete preference, 3 for autosave message preference, 4 for send message header preference, 5 for bilingual greeting preference, 6 for clock preference. To return press 7.

8493 Default ReachMe number menu - extended

To listen to your ReachMe number, press 1. To set your ReachMe number, press 2. To delete your ReachMe number, press 3. To return, press 7.

8494 Temporary ReachMe number menu - extended

To listen to your temporary ReachMe number, press 1. To set your temporary ReachMe number, press 2. To delete your temporary ReachMe number, press 3. To return, press 7.

8495 Default assistant number menu - extended

To listen to your assistant number, press 1. To set your assistant number, press 2. To delete your assistant number, press 3. To return, press 7.

8496 Temporary assistant number menu - extended

To listen to your temporary assistant number, press 1. To set your temporary assistant number, press 2. To delete your temporary assistant number, press 3. To return, press 7.

8497 Default call-forwarding number menu - extended

To listen to your call-forwarding number, press 1. To set your call-forwarding number, press 2. To delete your call-forwarding number, press 3. To return, press 7.

8498 Temporary call-forwarding number menu - extended

To listen to your temporary call-forwarding number, press 1. To set your

temporary call-forwarding number, press 2. To delete your temporary call-forwarding number, press 3. To return, press 7.

8499 Default fax number menu - extended

To listen to your fax number, press 1. To set your fax number, press 2. To delete your fax number, press 3. To return, press 7.

8500 Temporary fax number menu - extended

To listen to your temporary fax number, press 1. To set your temporary fax number, press 2. To delete your temporary fax number, press 3. To return, press 7.

8501 Default pager number menu - extended

To listen to your pager number, press 1. To set your pager number, press 2. To delete your pager number, press 3. To return, press 7.

8502 Temporary pager number menu - extended

To listen to your temporary pager number, press 1. To set your temporary pager number, press 2. To delete your temporary pager number, press 3. To return, press 7.

8503 Default pager reference menu - extended

To listen to your pager reference, press 1. To set your pager reference, press 2. To delete your pager reference, press 3. To return, press 7.

8504 Temporary pager reference menu - extended

To listen to your temporary pager reference, press 1. To set your temporary pager reference, press 2. To delete your temporary pager reference, press 3. To return, press 7.

8505 Operator number menu - extended

To listen to your operator number, press 1. To set your operator number, press 2. To delete your operator number, press 3. To return, press 7.

8642 Play headers off menu - extended

To choose not to play message headers before each message press 2. Press 7 to cancel.

8645 New message delete off menu - extended

To disable new message deletion press 2. Press 7 to cancel.

8648 Autosave message off menu - extended

To choose not to save new messages automatically press 2. Press 7 to cancel.

8651 Send message header menu - extended

To specify the message address after recording the message press 2. Press 7 to cancel.

8654 Bilingual greetings off menu - extended

To disable bilingual greetings press 2. Press 7 to cancel.

8657 Clock preference 24 menu - extended

To use the 24-hour clock press 2. Press 7 to cancel.

8658 E-mail menu - extended

To set your message destination preferences press 1. To set your message destination type press 2. To return press 7.

8659 Message destination preference menu - extended

To select a message destination of local, press 1. Press 2 for remote, 3 for local and remote. To return, press 7.

8660 Sync type menu - extended

To select a type of all press 1. Press 2 for nolink, 3 for voice mail to e-mail. To return press 7.

8661 Message destination type menu - extended

To select a type of .wav press 1. Press 2 for .au, 3 for DT/6, 4 for DT/6 GSM, 5 for 32KADPCM. To return press 7.

8662 Sync user off menu - extended

To disable synchronization press 2. Press 7 to cancel.

8665 ReachMe options menu - extended

To confirm your ReachMe Number, press 2; otherwise, press 7 to cancel.

8670 Play headers on menu - extended

To play message headers before each message press 2. Press 7 to cancel.

8671 New message delete on menu - extended

To enable new message deletion press 2. Press 7 to cancel.

8672 Confirm automatic saving of new messages

To save new messages automatically, press 2. To cancel, press 7.

8673 Send message before menu - extended

To specify the message address before recording the message press 2. To cancel, press 7.

8674 Bilingual greetings on menu - extended

To enable bilingual greetings press 2. To cancel, press 7.

8675 Clock preference 12 menu

To use the 12-hour clock press 2. To cancel, press 7.

8676 Sync user on menu - extended

To enable synchronization press 2. To cancel, press 7.

8691 Pager number options menu - extended

To confirm the pager number, press 2. To cancel, press 7.

8692 Pager reference options menu - extended

To confirm the pager reference, press 2. To cancel, press 7.

8693 Operator options menu

To confirm the operator number press 2. To cancel, press 7.

8723 New greeting header menu

To listen to the greeting header press 1. To delete the greeting header, press 3. To record the greeting header, press 4. To select a greeting, press 5. To work with your greetings, press 6. To hear your currently active greeting, press 9. To return, press 7.

8724 New notice board menu

To create a notice board, press 2. To return, press 7.

8725 Notice board menu

To listen to the notice board, press 1. To update, press 2. To delete, press 3. To return, press 7.

8996 Keys during main listen menu - extended

To hear message again, press 1. To save the message, press 2. To delete the message, press 3.

8997 Keys during outmail listen menu - extended

To hear message again, press 1. To delete the message, press 3.

8998 Beep error

[A dissuasion tone played when someone makes a bad choice; followed by a 1-second pause.]

9000 Automated call - extended

Automated call. Please disconnect. *[Note: This segment must be shorter than 4 seconds.]*

9001 Computer controlled number

You have called a computer controlled number. Please hang up.

9010 Brief silence

[short pause – 500 ms silence.]

9020 Invalid key tone

[suasion tone]

9500 Main menu - no local messages

To receive your remote e-mail messages, press 1. To send a message, press 2. To work with your greetings, press 3. For personal options, press 4. For call-handling and outgoing mail, press 5. To exit, press 7.

9501 Local and remote messages menu

For local messages, press 1. For remote e-mail messages, press 2. To return, press 7.

9502 Directory filter menu

For all your messages, press 1. For messages from a particular person, press 2. To return, press 7.

9503 Main menu - Residential subscriber

To retrieve your messages, press 1. To work with your greeting, press 3. To change your password, press 4. To exit, press 7.

9504 Main menu - no local messages - Residential subscriber

To work with your greeting, press 3. To change your password, press 4. To exit, press 7.

9505 Main menu - Remote e-mail only subscriber

To retrieve your e-mail messages, press 1. To change your password, press 4. To work with your deleted e-mail messages, press 5.

9506 Listen options menu - Residential subscriber

To move to the next message, press #. To listen to the message, press 1. To save the message, press 2. To delete the message, press 3. To return, press 7.

9507 Greeting menu - Residential subscriber

To listen to the greeting, press 1. To record the greeting, press 2. To delete the greeting, press 3. To return, press 7.

9508 Default Remote e-mail only subscriber greeting

This subscriber cannot accept voice messages.

9509 Greeting announcement

Your current greeting is...

9510 No greeting announcement

You do not currently have a greeting recorded.

9511 Get control menu option - no prompt - Residential subscriber

To start recording immediately, press #. To cancel and start again, press *. To sign on to Message Center, press 7. To disconnect, press 9.

9512 Get control menu option - Residential subscriber

To cancel and start again, press *. To sign on to Message Center press 7. To disconnect, press 9.

9513 Main post-record options menu

To hear the message again, press 1. To save the message you have just recorded, press 2. To cancel the message and start again, press 3. To record the message again, press 4. To mark the message as urgent, press 5. To mark the message as private, press 6. For other contact options, press #.

9514 Extended contact options menu

For immediate assistance, press 0. To dial another number, press 1. To reach the person's assistant, press 2. To try and reach the person you are calling, press 3. To page the person you are calling, press 4.

9515 Expert main menu - no local messages

Receive e-mail 1. Send 2. Greetings 3. Personal 4. Call-handling 5. Exit 7.

9516 Receive messages options menu

To receive your voice messages, press 1. To receive your remote e-mail messages, press 2.

9517 Expert receive messages options menu

Voice 1. E-mail 2.

9518 Receive local messages options menu header

Receive voice messages menu.

9519 Receive remote messages options menu header

Receive e-mail messages menu.

9520 Server problem e-mail account

You currently do not have any e-mail server information configured. Please go to the Message Center web site and add your e-mail server name, logon name and password. Contact your system administrator if you continue to have a problem.

9521 Logon problem e-mail account

We are sorry, but we could not log on to your e-mail server using the logon name and password that we have registered for you. Please go to the

Message Center web site and reenter this information. Contact your system administrator if you continue to have problem.

9522 Expert directory filter menu

All in address book 1. Particular person 2. All e-mail 3. Exit 7.

9523 Directory filter menu

To listen to e-mail messages from members of your personal address book, press 1. To listen to e-mail messages from a person or group name, press 2. To listen to all your e-mail messages, press 3. To exit, press 7.

9524 Directory filter menu header

Directory filter menu.

9525 Senders list announcement

For messages from...

9526 Press zero

... Press zero.

9527 No directory selection

To return without selecting a personal directory entry, press #.

9528 Invalid directory entry

I am sorry, but this is not a valid directory entry.

9529 Directory empty

Your personal directory is empty.

9530 E-mail options help menu header

E-mail options help menu.

9531 E-mail options help menu - while header is being played

To move to the next message, press #. To play the body of the message, press 1. To save the message, press 2. To delete the message, press 3. To reply to the message, press 4. To forward the message, press 5. To add the sender to your personal directory, press 6. To hear the message header again, press 8.

9532 Expert e-mail options help menu - while header is being played

Next, #. Listen body, 1. Save, 2. Delete, 3. Reply, 4. Forward, 5. Add sender, 6. Hear header again, 8.

9533 Sender announcement

... from...

9534 Subject announcement

Subject...

9535 Date sent announcement

Received on...

9536 Unknown e-mail attachment format

There are attachments in the message that are neither text nor voice. Please use your e-mail client to retrieve these attachments.

9537 End e-mail options menu

To move to the next message, press #. To replay the body of the message, press 1. To save the message, press 2. To delete the message, press 3. To reply to the message, press 4. To forward the message, press 5. To add the sender to your personal directory, press 6. To hear the message header again, press 8. To replay the last two phrases, press 9.

9538 Expert end e-mail options menu

Next #. Replay body 1. Save 2. Delete 3. Reply 4. Forward 5. Save sender e-mail 6. Hear header again 8. Replay last two phrases 9.

9539 E-mail options menu header

E-mail options menu.

9540 E-mail options help menu - while body is being played

To move to the next message, press #. To replay the body of the message, press 1. To save the message, press 2. To delete the message, press 3. To reply to the message, press 4. To forward the message, press 5. To add the sender to your personal directory, press 6. To go back to the start of the previous phrase, press 7. To hear the message header again, press 8. To skip to the start of the next phrase, press 9.

9541 Confirm remote message marked as read

The message has been marked as read.

9542 Cannot mark remote message as read

The message could not be marked as read. Contact your system administrator if the problem persists.

9543 No more new remote messages

You have no more new messages.

9544 Cannot delete remote message

The message could not be marked for deletion.

9545 Confirm deleted remote message

The message has been marked for deletion and will be purged when you hang up.

9546 Reply remote messages menu options

To hear the reply, press 1. To send the reply, press 2. To cancel the reply, press 3. To record the reply again, press 4. To return, press 7.

9547 Expert reply remote messages menu options

Hear reply 1. Send 2. Cancel 3. Record again 4. Return 7.

9548 Reply to e-mail menu

Reply e-mail options menu.

9549 Confirm reply sent

Your reply has been sent.

9550 Cannot send reply

An error occurred while sending the reply. If the problem persists, please contact your system administrator.

9551 Senders list announcement

To forward the message to....

9552 Cannot forward message

The message was not forwarded.

9553 Forward remote messages options menu

To listen to the comment before sending, press 1. To send the message now, press 2. To change the addressee, press 5. To add a comment to the message, press 6. To cancel, press 7.

9554 Expert forward remote messages options menu

Listen comment 1. Send 2. Change addressee 5. Add comment 6. Cancel 7.

9555 Forward remote messages options menu header

Forward e-mail options menu.

9556 Cannot record comment

No comment was recorded.

9557 Confirm forward sent

The message was forwarded successfully.

9558 Cannot forward messages

The message could not be forwarded. If the problem persists, please contact your system administrator.

9559 Cannot read last two phrases

The last two phrases of the message could not be read. If the problem persists, please contact your system administrator.

9560 Empty text part

This e-mail contains an empty text part.

9561 Expert e-mail options help menu - while header is being played

To move to the next message, press #. To play the body of the message, press 1. To delete the message, press 3. To reply to the message, press 4. To forward the message, press 5. To add the sender to your personal directory, press 6. To hear the message header again, press 8.

9562 Expert e-mail options help menu - while body is being played

To move to the next message, press #. To replay the body of the message, press 1. To delete the message, press 3. To reply to the message, press 4. To forward the message, press 5. To add the sender to your personal directory, press 6. To go back to the start of the previous phrase, press 7. To hear the message header again, press 8. To skip to the start of the next phrase, press 9.

9563 End e-mail options menu - saved messages

To move to the next message, press #. To replay the body of the message, press 1. To delete the message, press 3. To reply to the message, press 4. To forward the message, press 5. To add the sender to your personal directory, press 6. To hear the message header again, press 8. To replay the last two phrases, press 9.

9564 Expert end e-mail options menu - saved messages

Next #. Replay body 1. Delete 3. Reply 4. Forward 5. Save sender e-mail 6.
Hear header again 8. Replay last two phrases 9.

9565 No subject

There is no subject.

9566 Urgent message number announcement

New urgent message number...

9567 Remote e-mail only subscriber - main menu

To receive your remote e-mail messages, press 1. To change your password,
press 4. To work with your deleted messages, press 5. To exit, press 7.

9568 Expert Remote e-mail only subscriber - main menu

Receive e-mail 1. Change password 4. Delete messages 5. Exit 7.

9569 Current greeting announcement

You have said that...

9570 Option available and working at the office

...you are available and working at the office.

9571 Option available and working away from the office

...you are available, but working away from the office.

9572 Option unavailable but accepting messages

...you are unavailable but accepting messages

9573 Option left for the day

...you have left for the day.

9574 Option unavailable and not accepting messages

...you are unavailable and not accepting messages.

9575 No greeting

There is no valid greeting selected...

9576 Greeting options menu - expert prompt

If you are available and working at the office, press 1. If you are available and
working away from the office, press 2. If you are unavailable, press 3. If you
have left for the day, press 4. If you wish to update the greeting which plays
when you are speaking on the phone, press 5. To update your greeting
header, press 6.

9577 Greeting main menu - normal prompt

If you are available and working at the office, press 1. If you are available and
working away from the office, press 2. If you are unavailable, press 3. If you
have left for the day, press 4. If you wish to update the greeting which plays
when you are speaking on the phone, press 5.

9578 Greeting options menu header

Greeting Options Menu.

9579 Unavailable options menu

You have said you were not available. If you are accepting messages, press 1.
If you are not accepting messages, press 2. To return, press 7.

9580 Unavailable options menu header

Unavailable Options Menu.

9581 Greeting selected does not exist

The greeting you have selected does not exist. You must now record that greeting or select a different greeting that does exist.

9582 Greeting selected announcement

The greeting that will play when...

9583 Greeting available and working at the office

...you are available and working at the office...

9584 Greeting available and working away from the office

...you are available, but working away from the office...

9585 Greeting left for the day

...you have left for the day...

9586 Busy greeting

...you are on the phone...

9587 Greeting header

...your greeting header...

9588 is

...is...

9589 No greeting selected

No greeting selected.

9590 Current greeting - unavailable but accepting messages

...you are unavailable but accepting messages...

9591 Current greeting - unavailable and not accepting messages

...you are unavailable and not accepting messages...

9592 Update greeting menu

To keep this greeting, press 1. To re-record this greeting, press 2. To delete the greeting, press 3.

9593 Update greeting menu header

Update Greeting Menu.

9594 Record greeting requested

Please record your greeting after the tone. Press # to finish.

9595 Confirm greeting changed

The greeting has been changed.

9596 Confirm greeting deletion

The greeting has been deleted.

9597 Nothing recorded

Nothing was recorded.

9598 Caller options available announcement

The options that you currently have active are...

9599 Leave a message option

Callers can leave you a message.

9600 Pager option

Callers can page you.

9601 Follow-Me option

Callers can use ReachMe.

9602 Backup option

Callers can transfer to your assistant.

9603 Transfer option

Callers can transfer to the call center or to any other extension.

9604 Caller options available menu

To change further greeting, press 3. To change call-handling options, press 5.

To return to the main menu, press 7.

9605 Caller options available menu header

Caller options available menu.

9606 Update greeting menu - no current greeting

To keep this greeting, press 1. To re-record this greeting, press 2.

9607 Call-handling options menu

To set your ReachMe number, press 1. To set your assistant number, press 2.

To transfer to another number, press 3. To work with your outgoing mail, press

4. To set your automatic call-forwarding number, press 5. To work with your deleted messages, press 8. For further options, press 9.

9608 Expert call-handling options menu

ReachMe 1. Assistant 2. Transfer 3. Outgoing mail 4. Automatic call forwarding
5. Deleted messages 8. More options 9.

9609 Confirm message undeletion

The message has been undeleted.

9610 No deleted messages

You have no deleted messages.

9611 Deleted messages option menu

For deleted voice messages, press 1. For deleted remote e-mail messages,
press 2.

9612 Expert deleted messages option menu

Voice messages, 1. Remote e-mail messages, 2.

9613 One deleted message

You have one deleted message.

9614 Two deleted messages

You have two deleted messages.

9615 Three deleted messages

You have three deleted messages.

9616 Four deleted messages

You have four deleted messages.

9617 Five deleted messages

You have five deleted messages.

9618 Six deleted messages

You have six deleted messages.

9619 Seven deleted messages

You have seven deleted messages.

9620 Eight deleted messages

You have eight deleted messages.

9621 Nine deleted messages

You have nine deleted messages.

9622 10 deleted messages

You have 10 deleted messages.

9623 11 deleted messages

You have 11 deleted messages.

9624 12 deleted messages

You have 12 deleted messages.

9625 13 deleted messages

You have 13 deleted messages.

9626 14 deleted messages

You have 14 deleted messages.

9627 15 deleted messages

You have 15 deleted messages.

9628 16 deleted messages

You have 16 deleted messages.

9629 17 deleted messages

You have 17 deleted messages.

9630 18 deleted messages

You have 18 deleted messages.

9631 19 deleted messages

You have 19 deleted messages.

9632 20 deleted messages

You have 20 deleted messages.

9633 Number of deleted messages

...deleted messages.

9634 No more deleted messages

You have no more deleted messages.

9635 Evaluate stop key header - during deleted message

Listening to a deleted message.

9636 Deleted voice messages interrupted menu

To hear the message again, press 1. To undelete the message, press 4.

9637 Deleted voice messages option menu

To move to the next message, press #. To listen to the message, press 1. To undelete the message, press 4. To hear when the message was sent, press 8.

9638 Expert deleted voice messages option menu

Next, #. Listen, 1. Undelete, 4. Date and time, 8.

9639 Deleted voice messages menu header

Deleted voice messages menu.

9640 Listen options help menu - deleted voice messages

To move to the next message, press #. To listen to the message, press 1. To undelete the message, press 4. To hear when the message was sent, press 8.

9641 Deleted message number announcement

Deleted message number...

9642 Deleted messages option menu

For deleted voice messages, press 1. For deleted remote e-mail messages, press 2.

9643 Expert deleted messages option menu

Voice 1. E-mail 2.

9644 Record current greeting option

To record this greeting, press 2.

9645 Record greeting - first time logon

Thank you...you can now record your available and working at the office greeting or use a system greeting.

9646 Record greeting options menu - first time logon

To choose the system greeting, press 1. To record your "available and working at the office" greeting, press 2.

9647 Good advice about recording greeting

Here is some good advice about the type of things you should consider in your "available and working at the office" greeting.

9648 Record available and working at the office greeting

At the tone, please record your "available and working at the office" greeting. Press # when you have finished.

9649 Confirm available and working at the office greeting recorded

The "available and working at the office" greeting you recorded was...

9650 Record current greeting option menu

If you would like to re-record your greeting, press 4. If you are satisfied, press # .

9651 Immediate assistance option

For immediate assistance, press 0.

9652 Transfer option

To dial another number, press 1.

9653 Backup option

To reach the person's assistant, press 2.

9654 Follow-Me option

To try and reach the person you are calling, press 3.

9655 Pager option

To page the person you are calling, press 4.

9656 Expert listen options menu

Next #. Listen 1. Delete 3. Reply 4. Forward 5. Call sender 6. Date and Time
8. Listen to last nine seconds 9

9657 Listen options menu

To listen to the message, press 1. To save the message, press 2. To delete the message, press 3. To reply to the message, press 4. To forward this message to another number, press 5. To call the person who sent this message, press 6. To hear when the message was sent, press 8. To listen to the last nine seconds of the message, press 9. To move to the next message, press #.

9658 Listen options menu 2

To listen to the message, press 1. To reply to the message, press 4. To forward this message to another number, press 5. To call the person who sent this message, press 6. To hear when the message was sent, press 8. To listen to the last nine seconds of the message, press 9. To move to the next message, press #.

9659 Personal options menu

To work with your distribution lists, press 1. For your e-mail preferences, press 2. To change your password, press 3. For notification schedules, press 4. For the notice board, press 5. To record your audio name, press 6. To switch between standard and expert prompts, press 8. To work with other options, press 9. To return, press 7.

9660 Personal options menu 2

To select your voice message preferences, press 1. To select language, press 3. To return, press 7.

9661 Expert personal options menu

Distribution lists 1. E-mail 2. Password 3. Schedules 4. Notice board 5. Audio name 6. Return 7. Prompts 8. More options 9.

9662 Expert personal options menu 2

Message preferences 1. Language 3. Return 7.

9663 Contact options menu header

Contact Options Menu.

9664 Call handling options menu 2

To work with your fax number, press 1. To work with your pager number, press 3. To work with your pager reference number, press 5. To work with the operator number, press 8. To return, press 7.

9665 No answering service greeting

...has no answering service. Please try an alternative number, or if you wish you may press 0 for more options.

9666 End e-mail options menu - without options [2] and [9]

To move to the next message, press #. To replay the body of the message, press 1. To delete the message, press 3. To reply to the message, press 4. To forward the message, press 5. To add the sender to your personal directory, press 6. To hear the message header again, press 8.

9667 Expert end e-mail options menu - without options [2] and [9]

Next #. Replay body 1. Delete 3. Reply 4. Forward 5. Save sender e-mail 6. Hear header again 8

9668 End e-mail options menu - without option [9]

To move to the next message, press #. To replay the body of the message, press 1. To save the message, press 2. To delete the message, press 3. To reply to the message, press 4. To forward the message, press 5. To add the sender to your personal directory, press 6. To hear the message header again, press 8.

9669 Expert end e-mail options menu - without option [9]

Next #. Replay body 1. Save 2. Delete 3. Reply 4. Forward 5. Save sender e-mail 6. Hear header again 8.

9670 Deleted new messages

...deleted new messages and...

9671 One deleted new message

You have one deleted new message and...

9672 No deleted new messages

You have no deleted new messages...

9673 Deleted saved messages

Deleted saved messages...

9674 One deleted saved message

One deleted saved message...

9675 No deleted saved messages

No deleted saved messages...

9676 Deleted e-mail options menu - while message is playing

To play the body of the message, press 1. To undelete the message, press 4. To hear the message header again, press 8. To move to the next message, press #.

9677 Expert deleted e-mail options menu - while message is playing

Replay body 1. Undelete 4. Hear header again 8. Next #.

9678 No more deleted messages

You have no more deleted new messages...

9679 Deleted e-mail options menu

To listen to the message again, press 1. To undelete the message, press 4. To hear the message header again, press 8. To move to the next message, press #.

9680 Expert deleted e-mail options menu

Listen 1. Undelete 4. Hear header again 8. Next #.

9681 Deleted e-mail options menu header

Deleted E-mail Options Menu.

9682 Cannot undelete message

The message could not be undeleted.

9683 Confirm new message deletion

Deleted new message number...

9684 Confirm saved message deletion

Deleted saved message number...

9685 Accessing e-mail account

Please wait while we access your e-mail account.

9686 Message preferences options menu

To set your play header preferences, press 1. Or press 2 for new messages delete preferences, 3 for auto-save messages preferences, 4 for send message header preferences, 6 for clock preference. To return, press 7.

9687 Deleted messages menu header

Deleted Messages Menu.

9688 Greeting interruption help

You have just interrupted a greeting by pressing *, the control key. To return to the greeting, press 1. To begin recording immediately, press #. For additional options, press 0.

9689 Interrupted announcement-only greeting - help

You have just interrupted a greeting by pressing *, the control key. To return to the greeting, press 1. For additional options, press 0.

9690 Record interruption help

You have just interrupted a greeting by pressing *, the control key. To continue, press #. For additional options, press 0.

9691 Message Center main menu

To receive your messages, press 1. To send a message, press 2. To work with your greetings, press 3. For personal options, press 4. For call-handling and outgoing mail, press 5. To exit, press 7.

9692 Expert Message Center main menu

Receive 1. Send 2. Greetings 3. Personal 4. Call-handling 5. Exit 7

9693 Message Center main menu - no messages

To send a message, press 2. To work with your greetings, press 3. For personal options, press 4. For call-handling and outgoing mail, press 5. To exit, press 7.

9694 Expert Message Center main menu - no messages

Send 2. Greetings 3. Personal 4. Call-handling 5. Exit 7

9695 Call-handling options menu 2 - extended

To work with your fax number, press 1. To work with your pager number, press 3. To work with your pager reference number, press 5. To work with the operator number, press 8. To return, press 7.

9696 Expert listen options menu for private messages (standard subscribers)

Listen 1. Delete 3. Reply 4. Call sender 6. Date and time 8. Next #.

9697 Listen options menu for private messages (standard subscribers)

To listen to the message, press 1. To save the message, press 2. To delete the message, press 3. To reply to the message, press 4. To call the person who sent this message, press 6. To hear when the message was sent, press 8. To move to the next message, press #.

9698 Listen options menu 2 for private messages (standard subscribers)

To listen to the message, press 1. To reply to the message, press 4. To call the person who sent this message, press 6. To hear when the message was sent, press 8. To move to the next message, press #.

9699 New private message number

New private message number.

9700 Expert listen options menu for private messages (business subscribers)

Listen 1. Delete 3. Reply 4. Call sender 6. Date and time 8. Last nine seconds 9. Next #.

9701 Listen options menu for private messages (business subscribers)

To listen to the message, press 1. To save the message, press 2. To delete the message, press 3. To reply to the message, press 4. To call the person who sent this message, press 6. To hear when the message was sent, press 8. To listen to the last nine seconds of the message, press 9. To move to the next message, press #.

9702 Listen options menu 2 for private messages (business subscribers)

To listen to the message, press 1. To reply to the message, press 4. To call the person who sent this message, press 6. To hear when the message was sent, press 8. To listen to the last 9 seconds of the message, press 9. To move to the next message, press #.

9703 Unsuccessful transfer

The transfer was unsuccessful.

9704 Notice board option

To listen to the notice board, press 5.

9705 New urgent private message

New urgent private message number...

9706 New emergency private message

New emergency private message number...

9707 Expert listen options menu 2

Listen 1. Reply 4. Forward 5. Call sender 6. Date and time 8. Last nine seconds 9. Next #.

9708 Expert listen options menu 2 for private messages (business subscribers)

Listen 1. Reply 4. Call sender 6. Date and time 8. Last 9 seconds 9. Next #.

9709 Message deleted

The message will be deleted when you hangup.

9710 Listen options menu

To save the message, press 2. To delete the message, press 3. To hear the message header again, press 8. To move to the next message, press #.

9711 Expert listen options menu

Next, #. Save, 2. Delete, 3. Header, 8.

9712 Confidential e-mail

This message is confidential. Please use your e-mail client to retrieve the message.

9713 You have one message

You have one message.

9714 Number of messages

...messages.

9715 Number of invalid messages

...invalid messages.

9716 Prompt for Reachme PIN

Please enter your Reachme password in order to receive the call.

9717 One invalid message

You have one invalid message.

9718 Message deleted

Message number...

9719 Urgent message number

Urgent message number...

9720 InvalidDistDest

Invalid destination found...

9800 Password was reused recently

This password was used recently, please choose a different password.

9801 Expert listen options menu

Listen 1. Delete 3. Reply 4. Call sender 6. Date and time 8. Next #.

9802 Listen options menu

To listen to the message, press 1. To save the message, press 2. To delete the message, press 3. To reply to the message, press 4. To call the person who sent this message, press 6. To hear when the message was sent, press 8. To move to the next message, press #.

9803 Listen options menu

To listen to the message, press 1. To reply to the message, press 4. To call the person who sent this message, press 6. To hear when the message was sent, press 8. To move to the next message, press #.

9804 Private new message number

Private new message number...

9805 Expert listen options menu

Listen 1. Delete 3. Reply 4. Call sender 6. Date and time 8. Last 9 seconds 9. Next #.

9806 Listen options menu

To listen to the message, press 1. To save the message, press 2. To delete the message, press 3. To reply to the message, press 4. To call the person who sent this message, press 6. To hear when the message was sent, press 8. To listen to the last 9 seconds of the message, press 9. To move to the next message, press #.

9807 Listen options menu

To listen to the message, press 1. To reply to the message, press 4. To call the person who sent this message, press 6. To hear when the message was sent, press 8. To listen to the last 9 seconds of the message, press 9. To move to the next message, press #.

9808 Search menu

To enter the telephone number of the recipient, press 1. To enter the name of the recipient, press 2. To return, press 7.

9809 Obtain search criteria by telephone number

Key in the phone number followed by the # key.

9810 Dial-by-name instructions

Enter letters of the name using key 1 for Q & Z. To finish, press #. For help entering letters, press *0.

9811 Search return too many results

More than 10 matches were found. Please continue to enter additional letters of the name or to start again, press #.

9812 Search unsuccessful

Sorry, the recipient could not be located.

9813 Wait while searching message

Searching...Please wait.

9814 Pause

Short Pause (500 msec).

9815 Leave a message option for Telephony Portal subscribers

If you would like to leave a message for the person you have called...

9816 Record a message option for Telephony Portal subscribers

Please speak after the tone.

9817 Exit menu option for Telephony Portal subscribers

To Exit....

9818 Disconnect message for Telephony Portal subscribers

You will now be disconnected.

9819 Welcome message for Telephony Portal subscribers

Welcome to Message Center.

9820 To search another location

To search the next directory...

9821 Next five search results

For the next five choices...

9822 Send message confirmation

To send this message to...

9823 Send message confirmation of e-mail address

...e-mail address...

9824 Send message confirmation of voicemail address

...voice mail address...

9825 Update personal directory confirmation

You have chosen to add...

9826 Update personal directory confirmation

...to your personal directory.

9827 Update personal directory menu

To add this person to your personal directory, press 1. To cancel, press 2.

9829 Personal directory update unsuccessful

Sorry. An entry for...

9830 Personal directory update unsuccessful

...already exists in your personal directory.

9831 Personal directory update confirmation

The entry has been successfully added to your personal directory. You may validate and edit the entry via the World Wide Web interface.

9832 Search failed

The number you entered has not been recognized, please try again.

9833 Search retry

The number was found but does not have an e-mail or voice mail address, please try again.

9834 Reply menu

To reply to the message, press 1. To call the person who sent the message, press 2.

9835 Searching personal directory

Please wait while we obtain the mail addresses from your personal directory.

9836 Message sent confirmation

Your message has been sent to...

9837 Cannot forward e-mail to voicemail destination

This e-mail message cannot be forwarded to a voicemail destination.

9838 No e-mail address when searching

The number has been found but does not have an e-mail address.

9839 Entering digitname help

Entering digitname.

9840 No text-to-speech engine configured

Text-to-speech is not configured. Please contact your system administrator.

9841 Password entry invalid

Your entry is not valid. Passwords must be 2 to 8 digits in length.

9842 Password entry invalid

Your entry is not valid. Passwords must be 3 to 8 digits in length

9843 Password entry invalid

Your entry is not valid. Passwords must be 4 to 8 digits in length

9844 Password entry invalid

Your entry is not valid. Passwords must be 5 to 8 digits in length

9845 Password entry invalid

Your entry is not valid. Passwords must be 6 to 8 digits in length.

9846 Password entry invalid

Your entry is not valid. Passwords must be 7 to 8 digits in length.

9847 Password entry invalid

Your entry is not valid. Passwords must be 8 digits in length

9854 Number of POP3 messages that are too large to be retrieved

...messages which are larger than the maximum message size allowed on this system

9855 One POP3 message that is too large to be retrieved

You have one message which is larger than the maximum message size allowed on this system

16101 Selecting speech recognition

If you want to speak the keys to Message Center instead of entering them on your keypad, please say "yes" now.

16102 Speech recognition: requesting extension number

Please enter your extension number by speaking it as single digits with short pauses between the digits. Complete your entry by saying "stop".

16103 Speech recognition: requesting password

Please enter your password by speaking it as single digits with short pauses between the digits. Complete your entry by saying "stop".

16104 Speech recognition: usage instructions

You can now use Message Center by speaking single digits when it asks you to press keys. If Message Center asks you to enter a number consisting of

several digits followed by #, speak the digits with short pauses between the digits and complete your entry by saying “stop”.

16105 Speech recognition: no voice detected

No voice was detected.

16106 Speech recognition: repeat input

Please repeat your input.

16107 Speech recognition: input not recognized

Your input was not recognized.

16108 Speaker verification: user name request

Please speak your user name now.

16109 Speaker verification: user name not recognized

Your user name was not recognized.

16110 Speaker verification: pass phrase request

Please speak your pass phrase now.

16111 Speaker verification: pass phrase not recognized

Your pass phrase was not recognized.

IMC_SYSTEM voice directory (voice segment details)

This voice directory contains voice segments used by Message Center. As supplied, this directory is recorded using the same voice as the IMC voice directory, so you can use the same voice for all Message Center prompts.

The DirectTalk system voice directory holds similar voice segments recorded in a different voice. You may want to use this voice directory in applications not related to Message Center.

- 1 One
- 2 Two
- 3 Three
- 4 Four
- 5 Five
- 6 Six
- 7 Seven
- 8 Eight
- 9 Nine
- 10 Ten
- 11 Eleven
- 12 Twelve
- 13 Thirteen

IMC_SYSTEM voice directory

14	Fourteen
15	Fifteen
16	Sixteen
17	Seventeen
18	Eighteen
19	Nineteen
20	Twenty
21	Twenty one
22	Twenty two
23	Twenty three
24	Twenty four
25	Twenty five
26	Twenty six
27	Twenty seven
28	Twenty eight
29	Twenty nine
30	Thirty
31	Thirty one
32	Thirty two
33	Thirty three
34	Thirty four
35	Thirty five
36	Thirty six
37	Thirty seven
38	Thirty eight
39	Thirty nine
40	Forty
41	Forty one
42	Forty two
43	Forty three
44	Forty four
45	Forty five
46	Forty six

47	Forty seven
48	Forty eight
49	Forty nine
50	Fifty
51	Fifty one
52	Fifty two
53	Fifty three
54	Fifty four
55	Fifty five
56	Fifty six
57	Fifty seven
58	Fifty eight
59	Fifty nine
60	Sixty
70	Seventy
80	Eighty
90	Ninety
100	Zero
101	Oh
102	Hundred
103	Thousand
106	Million
109	Billion
140	a.m.
141	p.m.
142	Hours
143	O'clock
144	Yesterday
145	Today
146	Tomorrow
147	Minutes
148	Seconds
150	January

IMC_SYSTEM voice directory

151	February
152	March
153	April
154	May
155	June
156	July
157	August
158	September
159	October
160	November
161	December
163	Monday
164	Tuesday
165	Wednesday
166	Thursday
167	Friday
168	Saturday
169	Sunday
170	1st
171	2nd
172	3rd
173	4th
174	5th
175	6th
176	7th
177	8th
178	9th
179	10th
180	11th
181	12th
182	13th
183	14th
184	15th

185	16th
186	17th
187	18th
188	19th
189	20th
190	21st
191	22nd
192	23rd
193	24th
194	25th
195	26th
196	27th
197	28th
198	29th
199	30th
200	31st
201	Quote
202	Unquote
203	[<i>short pause.</i>]
204	[<i>medium pause.</i>]
210	40th
211	50th
212	60th
213	70th
214	80th
215	90th
216	tenths
217	hundredths
218	thousandths
219	millionths
220	billionths
301	...and...
302	...of...

IMC_SYSTEM voice directory

	303	...the...
	304	dollars
	305	cents
	306	...as...
	310	Negative
	400	We are experiencing technical difficulties. Please hang up, and call back later.
	401	Ringback tone
	402	Busyback tone
	403	Fast busyback tone
	404	<beep>
	406	Your input is too long. Please try again.
	1000	Enter a segment ID followed by the # key.
	1005	You have entered an invalid segment ID.
	1010	Enter a voice function 1 to record, 3 to listen, 6 to delete, or # to go back to the beginning.
	1015	Record voice at the tone. To stop, press # .
	1020	Playing recorded voice.
	1025	The requested voice was not found.
	1030	No voice was recorded. The original segment has not been changed.
	1035	Deleting voice.
	1036	Please enter the voice directory ID followed by #.
	1037	Voice directory...
	1038	... does not exist
	1040	The voice segment has been deleted.
	1041	Segment number.
	1042	To record, press 1. To listen, press 3. To move to the next segment, press 9.
		To move to any segment, press 8. To move to the previous segment, press 7.
		To delete the segment, press 4. To change voice directory, press 6. To change the language, press 5.
	1050	Welcome to DirectTalk for AIX.

Appendix C. The Message Center state tables

This chapter describes the Message Center state tables. Table 13 lists the state tables that you can customize. Message Center also uses other state tables that you cannot change; these are listed under “Internal Message Center state tables” on page 194.

Table 13. Message Center state tables

Message Center state table name	ASCII source state table name	Description	Page
IMC_AMIS_GDPARM	amis_gdparm	Gets AMIS-D information from the AMIS database.	195
IMC_AMIS_GOPARM	amis_goparm	Gets AMIS-O information from the AMIS database.	195
IMC_AMIS_G_NC	amis_g_nc	Gets information about a node code for a given destination from the AMIS database.	196
IMC_AMIS_G_NI	amis_g_ni	Gets node information for a node code from the AMIS database.	196
IMC_AMIS_G_O	amis_g_o	Gets the AMIS-O application profile ID from the AMIS database.	196
IMC_AMIS_LOGS	amis_logs	Switches logging of AMIS function on and off. The default is off.	197
IMC_AMIS_SDESTN	amis_sdestn	Gets the location code and mailbox of a given destination from the AMIS database.	197
IMC_AMIS_VN	amis_vn	Controls sending messages to external voice-messaging systems.	197
IMC_BANK	bank	An example state table, showing how to invoke Message Center in a transaction-messaging environment.	198
IMC_BI_LING	bi_ling	Makes a subscriber's greetings bilingual.	198
IMC_CHK_DLIST	chk_dlist	Checks that a distribution list number is valid when a subscriber is setting it.	200
IMC_CHK_DPTY	chk_dpty	Checks the assistant number when a subscriber is setting it.	200
IMC_CHK_FAX	chk_fax	Checks that the fax number keyed by a subscriber is valid.	201
IMC_CHK_OPER	chk_oper	Checks that the operator number keyed by a subscriber is valid.	201
IMC_CHK_PAGEME	chk_pageme	Checks that the pager number keyed by a subscriber is valid.	201
IMC_CHK_PASWD	chk_paswd	Checks that a subscriber's password is not the same as the previous password and meets other location standards.	202

Message Center state tables

Table 13. Message Center state tables (continued)

Message Center state table name	ASCII source state table name	Description	Page
IMC_CHK_REACHME	chk_reachme	Checks that the ReachMe number keyed by a subscriber is valid.	202
IMC_CHK_RFRL	chk_rfrl	Checks the number when a subscriber sets a call-forwarding number.	202
IMC_CHK_SCHED	chk_sched	Checks the number when a subscriber is setting an outdialing number for notification.	203
IMC_CLR_SMEN	clr_smen	Handles the menus available to callers when their call to a Standard subscriber is answered by Message Center.	203
IMC_CLR_SMEN_01	clr_smen_01	Handles the menus available to callers when their call to a Business - local & remote subscriber is answered by Message Center.	204
IMC_CLR_SMEN_02	clr_smen_02	Handles the menus available to callers when their call to a Business - local subscriber is answered by Message Center.	204
IMC_CLR_SMEN_03	clr_smen_03	Handles the menus available to callers when their call to a Residential subscriber is answered by Message Center.	204
IMC_CLR_SMEN_04	clr_smen_04	Handles the menus available to callers when their call to a Remote e-mail only subscriber is answered by Message Center.	204
IMC_CLR_SMEN_09	clr_smen_09	Handles the menus available to callers when their call to a telephony portal user is answered by Message Center.	204
IMC_CTRL_MENU	ctrl_menu	Handles the control menu functions available when the caller or Standard subscriber presses *, the ISO control key.	205
IMC_CTL_MENU_01	ctl_menu_01	Handles the control menu functions available when the caller or Business - local & remote subscriber presses *, the ISO control key.	205
IMC_CTL_MENU_02	ctl_menu_02	Handles the control menu functions available when the caller or Business - local subscriber presses *, the ISO control key.	205
IMC_CTL_MENU_03	ctl_menu_03	Handles the control menu functions available when the caller or Residential subscriber presses *, the ISO control key.	205

Message Center state tables

Table 13. Message Center state tables (continued)

Message Center state table name	ASCII source state table name	Description	Page
IMC_CTL_MENU_04	ctl_menu_04	Handles the control menu functions available when the caller or Remote e-mail only subscriber presses *, the ISO control key.	205
IMC_CTL_MENU_09	ctl_menu_09	Handles the control menu functions available when a telephony portal user presses *, the ISO control key.	206
IMC_EXIT, and IMC_EXIT2 to IMC_EXIT10	exit	Each of these state tables provides an exit from Message Center to allow local functions to be integrated with Message Center.	206
IMC_FIRSTTIME	firsttime	Handles the special dialog for first time Standard subscribers.	207
IMC_FIRSTTIME_01	firsttime_01	Handles the special dialog for first time Business - local & remote subscribers.	207
IMC_FIRSTTIME_02	firsttime_02	Handles the special dialog for first time Business - local subscribers.	207
IMC_FIRSTTIME_03	firsttime_03	Handles the special dialog for first time Residential subscribers.	207
IMC_FIRSTTIME_04	firsttime_04	Handles the special dialog for first time Remote e-mail only subscribers.	207
IMC_GETSTRG	getstrg	Collects strings of data input from the telephone key pad.	207
IMC_LANG	lang	Handles the dialog that enables a subscriber to change languages during a Message Center session and to reset the language permanently in the subscriber's application profile.	208
IMC_LANG_C	lang_c	Handles the dialog that enables a caller to change languages dynamically during a Message Center session. It does not reset the language in the application profile.	209
IMC_LOGON	logon	Plays each of the sign-on prompts and passes control back to IMC_MAIN to perform the complex sign-on logic.	209
IMC_MSG_CALL	msg_call	Makes an outgoing call to deliver a voice message when a subscriber accessing Message Center from the World Wide Web requests the message to be delivered to a telephone handset.	213
IMC_MSG_EXIT	msg_exit	Used by IMC_CALLER to determine the correct destination profile ID and mailbox for a message which has just been left.	214

Message Center state tables

Table 13. Message Center state tables (continued)

Message Center state table name	ASCII source state table name	Description	Page
IMC_NOTIFY	notify	Handles notification to subscribers when they have a new message.	215
IMC_OCALL_MAKE	ocall_make	Makes an outgoing call to notify subscriber of new messages.	216
IMC_OCALL_MENU	ocall_menu	Handles the menu presented to the subscriber on receipt of an outcall.	217
IMC_OCALL_START	ocall_start	The startup state table (see IMC_STARTUP) used when a subscriber who has received a notification outcall chooses to sign on to Message Center.	218
IMC_RECORDCOMP2	recordcomp2	Records and reviews voice segments.	218
IMC_REMCONF	remconf	Confirms message delivery to a remote destination.	219
IMC_REMGRT	remgrt	Plays the appropriate greeting for a remote subscriber who has no profile on this system.	219
IMC_REMMSGI	remmsgi	Plays the remote audio name for a message received from a remote system	219
IMC_SBR_MENU	sbr_menu	Handles the menus available to Standard subscribers when they are signed on to Message Center.	220
IMC_SBR_MENU_01	sbr_menu_01	Handles the menus available to Business - local & remote subscribers when they are signed on to Message Center.	221
IMC_SBR_MENU_02	sbr_menu_02	Handles the menus available to Business - local subscribers when they are signed on to Message Center.	221
IMC_SBR_MENU_03	sbr_menu_03	Handles the menus available to Residential subscribers when they are signed on to Message Center.	221
IMC_SBR_MENU_04	sbr_menu_04	Handles the menus available to Remote e-mail only subscribers when they are signed on to Message Center.	221
IMC_SBR_MENU_09	sbr_menu_09	Handles the menus available to telephony portal users when they are signed on to Message Center.	221
IMC_SBR_MENU_CH	sbr_menu_ch	Handles call-handling menus for Standard subscribers.	221
IMC_SBR_MENU_EM	sbr_menu_em	Handles e-mail menus for Standard subscribers.	222
IMC_SBR_MENU_MP	sbr_menu_mp	Handles message preference menus for Standard subscribers.	222

Message Center state tables

Table 13. Message Center state tables (continued)

Message Center state table name	ASCII source state table name	Description	Page
IMC_SBR_MENU_NB	sbr_menu_nb	Handles notice board menus for Standard subscribers.	223
IMC_SBR_MENU_NS	sbr_menu_ns	Handles notification schedule menus for Standard subscribers.	223
IMC_SBR_MNU_SCH	sbr_mnu_sch	Handles call-handling menus for Business - local & remote, Business - local, Residential, and Remote e-mail only subscribers.	223
IMC_SBR_MNU_SEM	sbr_mnu_sem	Handles e-mail menus for Business - local & remote, Business - local, Residential, and Remote e-mail only subscribers.	224
IMC_SBR_MNU_SMP	sbr_mnu_smp	Handles message preference menus for Business - local & remote, Business - local, Residential, and Remote e-mail only subscribers.	224
IMC_SBR_MNU_SNB	sbr_mnu_snb	Handles notice board menus for Business - local & remote, Business - local, Residential, and Remote e-mail only subscribers.	224
IMC_SBR_MNU_SNS	sbr_mnu_sns	Handles notification schedule menus for Business - local & remote, Business - local, Residential, and Remote e-mail only subscribers.	224
IMC_STARTUP	startup	An example state table, showing how to invoke Message Center in a DID environment.	225
IMC_START_AA	start_aa	An example state table, showing how to invoke Message Center in an auto-attendant environment.	226
IMC_START_QMG	start_qmg	The startup state table for Message Center quick message.	226
IMC_STATS	stats	Handles reporting of statistics from Message Center.	226
IMC_XFER	xfer	Invokes IMC_XFER_DO and provides feedback to the subscriber or caller in the form of prompts if the call transfer was not successful.	233
IMC_XFER_DO	xfer_do	Transfers calls from Message Center to another number.	233

Internal Message Center state tables

The following state tables are used by Message Center. The ASCII source for these state tables is not supplied, so you cannot change them:

IMC_ADD_DIR
IMC_AMIS_D
IMC_AMIS_D_HS
IMC_AMIS_D_MIF2
IMC_AMIS_D_MR
IMC_AMIS_D_SF
IMC_AMIS_D_SNF
IMC_AMIS_G_NO
IMC_AMIS_O
IMC_AMIS_O_MIF2
IMC_AMIS_RESETO
IMC_AMIS_SCH
IMC_CALLER (see page 199)
IMC_CHK_TIME
IMC_CR_DLIST
IMC_CLR_DYNMENU
IMC_DLIST
IMC_EMAIL_PREFS
IMC_FAX_IN
IMC_FAX_OUT
IMC_GET_DEST
IMC_GETDIREMAIL
IMC_GET_NUM
IMC_MAIN (see page 209)
IMC_MSG_ATTR
IMC_MSG_PREFS
IMC_NOTIC_BOARD
IMC_NUM_MGR
IMC_OUTCALL
IMC_OUT_MAIL
IMC_PLAY_MSG
IMC_RCV_DELVCE
IMC_RCV_EMAIL
IMC_RCV_FAX
IMC_RCV_MSG
IMC_READ_EMAIL
IMC_REC_GRT
IMC_SCHEDULE
IMC_SEND_FAX
IMC_SEND_MSG
IMC_TP_LOGON
IMC_TP_UTIL
IMC_UPD_GRT

IMC_AMIS_GDPARAM

Use this state table to get information from the AMIS database, if you are using a database other than the one supplied. This information is used at the AMIS destination when it receives an external message sent using the AMIS analog protocol.

This state table returns the following AMIS-D information:

AMIS_Profile

The predefined profile ID to be used by AMIS-O.

AMIS_Receiver

The predefined profile ID to be used by AMIS-D.

AreaCode

The number for the area of the installation.

AreaCodePrefix

A prefix to the area code used for national communications.

CountryCode

The number for the country of the installation.

IMC_AMIS_GOPARM

Use this state table to get AMIS information from the AMIS database, if you are using a database other than the one supplied.

This state table returns the following AMIS-O information for the specified destination:

AMIS_Origin

The phone number of this system (used for reply).

D_AMIS_A_Code

The AMIS analog destination area number.

D_AMIS_C_Code

The AMIS analog destination country number.

D_AMIS_Number

The AMIS analog destination number.

D_AMIS_Prefix

An area code prefix used for national communications.

Destination

The AMIS analog node you want information about.

Loc_Code

The destination location code.

Loc_Type

The node location type, internal or external.

OutsideLine

The number, if any, needed to initiate a call.

IMC_AMIS_GOPARM

V6 Tells you if the node supports the proprietary AMIS V6 protocol.

IMC_AMIS_G_NC

Use this state table to get AMIS information from the AMIS database, if you are using a database other than the one supplied.

The following parameters are passed to IMC_AMIS_G_NC:

AMIS_Number

The phone number of the destination node.

Area_Code

The country code of the destination node.

Country_Code

The area code of the destination node.

This state table returns:

Node_Code

The predefined code for this node.

IMC_AMIS_G_NI

Use this state table to get AMIS information from the AMIS database, if you are using a database other than the one supplied.

The following parameter is passed to IMC_AMIS_G_NI:

Node_Code

The predefined code for this node.

This state table returns:

AMIS_Number

The phone number of the destination node.

Area_Code

The area code of the destination node.

Country_Code

The country code of the destination node.

V6_Compliant

Tells you if the node supports the proprietary AMIS V6 protocol.

IMC_AMIS_G_O

Use this state table to get AMIS information from the AMIS database, if you are using a database other than the one supplied.

This state table returns the following AMIS information:

AMISProfile

The AMIS analog origin profile ID for this node.

AMISReceiver

The AMIS analog destination profile ID for this node.

IMC_AMIS_LOGS

Use this state table to control the amount of information logged by the AMIS state tables. The default is to log only errors; this is the minimum. Normally you would change this setting only to help with problem determination.

The following parameters are passed to IMC_AMIS_LOGS:

AMIS_ST_NAME

The name of the calling state table.

Amis_log_rc

The return code. Set this to 1 for logging of error conditions only. Set this to 2 to log progress in addition to errors.

IMC_AMIS_SDESTN

Use this state table to get AMIS information from the AMIS database, if you are using a database other than the one supplied. IMC_AMIS_SDESTN takes in the full AMIS destination keyed by the subscriber and splits it into the location code and the mailbox ID.

Destination

The external destination keyed by the subscriber.

LocationCode

The predefined code for the destination node.

MailBox

The mailbox number at that node.

For example, if the subscriber specifies **Destination** as 7162426, IMC_AMIS_SDESTN returns **LocationCode** as 716, and **Mailbox** as 2426.

IMC_AMIS_VN

Use this state table to validate AMIS nodes. It calls the IMC_RemoteSystems custom server to validate an external destination specified by a subscriber sending a message. You can add function to validate VPIM or SMTP/MIME e-mail destinations.

If you have not implemented external messaging at your location, you still need this state table, but you should exit the state table with the value 2, indicating invalid destination, each time.

The following parameters are passed to IMC_AMIS_VN:

IMC_AMIS_VN

AMISMailbox

This parameter determines the method of sending an external message. For AMIS analog transfer, the value is set to 1.

The IMC_RemoteSystems custom server returns the value to IMC_AMIS_VN. Do not change this value.

SendDestn

The digit string of the message destination requested by the sender.

SenderProfile

The profile ID of the subscriber sending an external message.

IMC_AMIS_VN performs the ExitStateTable action with one of the following results:

- 0 Proceed; destination is a valid AMIS_A destination.
- 1 Proceed; destination is a valid VPIM e-mail destination.
- 2 Destination number is invalid.
- 4 Do not proceed; user is not authorized to use external messaging.
- 6 Do not proceed; user is not authorized to use AMIS for external transfer.
- 8 Do not proceed: user is not authorized to use AMIS for external transfer to this country.

IMC_BANK

This example state table shows you how to invoke Message Center in a transaction-messaging environment.

Unlike IMC_STARTUP and IMC_START_AA, which are working applications, IMC_BANK merely demonstrates the principle of transaction-messaging.

To run IMC_BANK as a demonstration, record appropriate greetings in the voice mailboxes that it uses, numbers 221, 222, and 223.

No parameters are passed to IMC_BANK.

IMC_BI_LING

Use this state table to make a subscriber's greetings bilingual. IMC_BI_LING is an example and you can change it.

When Message Center plays a subscriber's bilingual greeting, it adds 30 to the greeting ID. This is for personal greetings and announcement-only greetings only; greeting headers and busy greetings are unaffected.

In the following example, personal greetings 1 and 3 are in one language and personal greetings 2 and 4 are in a second language. The subscriber should have recorded these greetings already. For personal greetings, IMC_BI_LING concatenates:

- Greetings 1 and 2 and saves the resulting greeting as 31.
- Greetings 2 and 1 and saves the resulting greeting as 32.
- Greetings 3 and 4 and saves the resulting greeting as 33.
- Greetings 4 and 3 and saves the resulting greeting as 34.

For announcement-only greetings, IMC_BI_LING concatenates:

- Greetings 7 and 11 and saves the resulting greeting as 37.
- Greetings 11 and 2 and saves the resulting greeting as 41.

When the bilingual parameter in the Global Variable Modification sections of MCIT is set to YES, Message Center uses greetings 31, 32, 33, 34, 37, and 41 in place of the usual greetings.

The following parameters are passed to IMC_BI_LING:

ProfileID

The profile ID of the subscriber using bilingual greetings.

Mailbox

The mailbox id for the bilingual greetings. For Message Center this is 1.

biling_rc

The return code set by IMC_BI_LING.

Always ExitStateTable(0) from IMC_BI_LING.

IMC_CALLER

Message Center uses this state table to handle incoming calls. It is called by IMC_MAIN to play the subscriber's chosen greeting and allow the caller to record a message.

This is an internal state table; you cannot modify it.

The following parameters are passed to IMC_CALLER:

CallingNumber

The caller's number. For DID, if the calling number is passed to DirectTalk by the switch, IMC_STARTUP gets it from the DirectTalk system variable, SV186. If no calling number is passed, IMC_STARTUP assumes that the caller is unknown and uses the value of the external caller application profile (typically 999999) instead.

If Message Center is being used for transaction messaging, the calling number should be set to the transaction ID of the related transaction. Message Center ensures that this data is stored in the DirectTalk transaction ID field on all voice messages created in this invocation of Message Center.

If in doubt about the calling number, set it to the external caller application profile ID.

IMC_CALLER

GIDBusy

The numeric ID of a busy greeting, defined in IMC_MAIN.

GIDHeader

The numeric ID of the greeting header, defined in IMC_MAIN.

GIDNoticeBoard

The numeric ID of the greeting used for the notice board.

ResetGreeting

The number of the greeting to use to override a subscriber's setting. For example, if a subscriber number becomes dormant, you might want to set the greeting to a general announcement-only greeting.

ST_JmpOutDTM

This is updated and passed back to IMC_MAIN if the caller asks to jump out of the greeting and sign on to Message Center.

ST_ProblemEnd

This is updated and passed back to IMC_MAIN if an error occurs while processing the call.

Changes to this state table should be made only by IBM Support personnel or IBM business partners who are experts on Message Center.

IMC_CHK_DLIST

This state table checks that the number keyed by a subscriber for a new distribution list ID is in the range that you allow. For example, you might want to make sure that numbers used for extension numbers are not used for distribution list IDs.

Note: Distribution list IDs must be in the range 1 to 9999.
The following parameters are passed to IMC_CHK_DLIST:

CallerID

The application profile ID of the subscriber creating the distribution list.

DlistNum

The number given by the subscriber for the new distribution list ID.

ExitStateTable (0) if the distribution list ID is allowed, and exit with any other value to disallow the distribution list ID.

IMC_CHK_DPTY

This state table checks that the assistant number keyed by a subscriber is valid. For example, certain classes of subscriber might be allowed to use only a local number for their assistant number.

The following parameters are passed to IMC_CHK_DPTY:

CallerID

The application profile ID of the subscriber setting the assistant number.

DeputyNum

The number that is being set as the assistant number.

See also the UniqueDlists parameter passed to IMC_MAIN.

ExitStateTable (0) if the assistant number is valid. Exit with any other value to disallow the assistant number, and it will not be set.

IMC_CHK_FAX

This state table checks that the fax number keyed by a subscriber is valid.

The following parameters are passed to IMC_CHK_FAX:

CallerID

The application profile ID of the subscriber setting the fax number.

DeputyNum

The number that is being set as the fax number.

ExitStateTable (0) if the fax number is valid. Exit with any other value to disallow the fax number, and it will not be set.

IMC_CHK_OPER

This state table checks that the operator number keyed by a subscriber is valid.

The following parameters are passed to IMC_CHK_OPER:

CallerID

The application profile ID of the subscriber setting the operator number.

DeputyNum

The number that is being set as the operator number.

ExitStateTable (0) if the operator number is valid. Exit with any other value to disallow the operator number, and it will not be set.

IMC_CHK_PAGEME

This state table checks that the pager number keyed by a subscriber is valid.

The following parameters are passed to IMC_CHK_PAGEME:

CallerID

The application profile ID of the subscriber setting the pager number.

DeputyNum

The number that is being set as the pager number.

IMC_CHK_PAGEME

ExitStateTable (0) if the pager number is valid. Exit with any other value to disallow the pager number, and it will not be set.

IMC_CHK_PASWD

This state table checks that the password requested by a subscriber meets your location standards.

The following parameters are passed to IMC_CHK_PASWD:

CurrentPW

The subscriber's current password.

RequestedPW

The subscriber's new password.

You can change IMC_CHK_PASWD to add checking that might be needed for password standards at your location.

If the password meets your installation standards, IMC_CHK_PASWD returns 0. If the password fails to meet your installation standards, IMC_CHK_PASWD returns 1.

If IMC_CHK_PASWD ExitStateTable returns 0, the following prompt is played to the subscriber:

"The password you entered does not meet location standards. Please try again with a different password."

You can change this prompt; it is voice segment 6593.

IMC_CHK_REACHME

This state table checks that the ReachMe number keyed by a subscriber is valid.

The following parameters are passed to IMC_CHK_REACHME:

CallerID

The application profile ID of the subscriber setting the ReachMe number.

DeputyNum

The number that is being set as the ReachMe number.

ExitStateTable (0) if the ReachMe number is valid. Exit with any other value to disallow the ReachMe number, and it will not be set.

IMC_CHK_RFRL

This state table checks that the number keyed by a subscriber for a call-forwarding number (also known as a referral number) is allowed. For example, you might not allow call-forwarding to be set by some classes of subscriber, while for others you might allow call-forwarding to local numbers, but not long-distance numbers.

The following parameters are passed to IMC_CHK_RFRL:

CallerID

The application profile ID of the subscriber who is requesting call-forwarding.

ReferralNum

The number to which call-forwarding has been requested.

ExitStateTable (0) if the call-forwarding number is valid. If you exit with any other value, call-forwarding will not be set.

IMC_CHK_SCHED

This state table checks that the number keyed by a subscriber when setting the phone number on which they want to be notified of new messages is allowed. For example, for some subscriber classes you might allow the notification number to be a local number but not a long-distance number.

The following parameters are passed to IMC_CHK_SCHED:

CallerID

The application profile ID of the subscriber requesting a notification number.

PhoneNum

The number requested as the notification number.

ExitStateTable (0) if the notification number passes your checks. If you return any other value, the notification number will not be allowed.

IMC_CLR_SMEN

This state table handles the menus available to callers when their call to a Standard subscriber is answered by Message Center. IMC_CLR_SMEN plays all the necessary menu prompts, collects the key entered by the caller in response to a prompt, and passes the meaning of that keystroke back to the main Message Center application.

Note: Use IMC_CLR_SMEN for Standard subscribers. For the other types of subscriber, use one of IMC_CLR_SMEN_01 to IMC_CLR_SMEN_04, as described on page 204.

The following parameters are passed to IMC_CLR_SMEN:

EntryPoint

The ID of the specific menu to be played. This is used by IMC_CLR_SMEN to branch to the correct state table label.

menu_rc

The return code passed back to Message Center that defines the choice made by the caller.

IMC_CLR_SMEN

ExitStateTable (0) from IMC_CLR_SMEN. Be careful only to set menu_rc to a valid return code for the particular menu requested. For a list of valid return codes, see the state table source code in directory /usr/lpp/dirTalk/sw/MessageCenter/st_src/clr_smen.

You should not normally need to change or replace IMC_CLR_SMEN. However if, for example, you wanted to change the options on the post-recording menu so that **5** was *transfer to operator* and **0** was *transfer to assistant* (the opposite of how IMC_CLR_SMEN is supplied), you would need to do only two things:

1. Rerecord the voice segment used by LeftOptMenu (segment number 8000) so that the caller is prompted to press **5** for the operator and **0** for assistant.
2. Change the GetKey statement so that IMC_CLR_SMEN returns *Operator* on pressing **5** and *Deputy* on pressing **0**.

The default key assignments in IMC_CLR_SMEN are consistent with the International Standard ISO/IEC 13714.

IMC_CLR_SMEN_01 to IMC_CLR_SMEN_04

These state tables serve the same function as IMC_CLR_SMEN, but are used for subscribers other than Standard. The number represents the subscriber type as follows:

- | | |
|-----------|---------------------------|
| 01 | Business - local & remote |
| 02 | Business - local |
| 03 | Residential |
| 04 | Remote e-mail only |

The following parameters are passed to these state tables:

EntryPoint

The ID of the specific menu to be played. This is used by IMC_CLR_SMEN_01 to IMC_CLR_SMEN_04 to branch to the correct state table label.

menu_rc

The return code passed back to Message Center that defines the choice made by the caller.

ExitStateTable(0) from IMC_CLR_SMEN_01 to IMC_CLR_SMEN_04. Be careful to set menu_rc to a valid return code for the particular menu requested.

For a list of valid return codes, see the state table source code in directory /usr/lpp/dirTalk/sw/MessageCenter/st_src/clr_smen_xx.

IMC_CLR_SMEN_09

This state table serves the same function as IMC_CLR_SMEN, but is used for telephony portal.

Always use ExitStateTable (0) from IMC_CLR_SMEN_09. Be careful to set SV74 to a valid return code for the particular menu requested. For a list of valid return codes, see the state table source code in directory
 /usr/lpp/dirTalk/sw/MessageCenter/st_src/clr_smen_09.

IMC_CTRL_MENU

This state table handles the Message Center control menu for Standard subscribers, which is always available when they press *.

Note: Use IMC_CTRL_MENU for Standard subscribers. For the other types of subscriber, use one of IMC_CTL_MENU_01 to IMC_CTL_MENU_04, as described on page 205.

The following parameter is passed to IMC_CTRL_MENU:

ctrl_menu_rc

The return code passed back to Message Center that defines the choice made by the caller.

Always use ExitStateTable (0) from IMC_CTRL_MENU. Be careful to set menu_rc to a valid return code for the particular menu requested. For a list of valid return codes, see the state table source code in directory
 /usr/lpp/dirTalk/sw/MessageCenter/st_src/ctrl_menu.

IMC_CTL_MENU_01 to IMC_CTL_MENU_04

These state tables serve the same function as IMC_CTRL_MENU, but are used for subscribers other than Standard. The number represents the subscriber type as follows:

- 01** Business - local & remote
- 02** Business - local
- 03** Residential
- 04** Remote e-mail only

The following parameter is passed to these state tables:

ctrl_menu_rc

The return code passed back to Message Center that defines the choice made by the caller.

Always use ExitStateTable(0) from IMC_CTL_MENU_01 to IMC_CTL_MENU_04. Be careful to set menu_rc to a valid return code for the particular menu requested.

For a list of valid return codes, see the state table source code in directory
 /usr/lpp/dirTalk/sw/MessageCenter/st_src/ctrl_menu_xx.

IMC_CTL_MENU_09

This state table serves the same function as IMC_CTRL_MENU, but is used for telephony portal.

Always use ExitStateTable (0) from IMC_CTL_MENU_09. Be careful to set SV74 to a valid return code for the particular menu requested. For a list of valid return codes, see the state table source code in directory
/usr/lpp/dirTalk/sw/MessageCenter/st_src/ctl_menu_09.

IMC_EXIT, IMC_EXIT2 – IMC_EXIT10

These state tables provide up to ten exits that let you integrate local functions with Message Center. One or more of the exits can be invoked from any Message Center menu.

To enable an exit:

1. Rerecord the voice segments for the menu to which you want to add the exit, adding the prompt for the exit choice (for example “For additional functions, press 9”).
2. Update the exit state table to include the functions you want to add. The source code for an example exit is found in directory
/usr/lpp/dirTalk/sw/MessageCenter/st_src/exit.
3. When the subscriber selects an exit, return the appropriate return code from IMC_SBR_MENU or one of the state tables IMC_SBR_MENU_01 to IMC_SBR_MENU_04:

```
140 for IMC_EXIT
144 for IMC_EXIT2
145 for IMC_EXIT3
146 for IMC_EXIT4
147 for IMC_EXIT5
148 for IMC_EXIT6
149 for IMC_EXIT7
150 for IMC_EXIT8
151 for IMC_EXIT9
152 for IMC_EXIT10
```

No parameters are passed to the exit state tables.

You can leave an exit state table, returning any of the Message Center atomic menu return codes. For a list of these, see the source for the IMC_SBR_MENU state table in the file /usr/lpp/dirTalk/sw/MessageCenter/st_src/sbr_menu.

Note: When you return to Message Center, all the major DirectTalk system variables must be exactly as you found them. In particular, you must not change SV20, the caller profile ID or SV25, the receiving profile ID.

IMC_FIRSTTIME

This state table can be invoked when a Standard subscriber signs on to Message Center for the first time. It is called if FirstTimeUsage is set to YES in the Global Variation Modification section in MCIT.

Note: Use IMC_FIRSTTIME for Standard subscribers. For the other types of subscriber, use one of IMC_FIRSTTIME_01 to IMC_FIRSTTIME_04, as described on page 207.

The following parameter is passed to IMC_FIRSTTIME:

menu_rc

The return code for IMC_FIRSTTIME. Set this to 0 if IMC_FIRSTTIME completes successfully. Set it to YES if the subscriber did not complete IMC_FIRSTTIME and must go through it again on the next sign on.

IMC_FIRSTTIME_01 to IMC_FIRSTTIME_04

These state tables serve the same function as IMC_FIRSTTIME, but are used for subscribers other than Standard. The number represents the subscriber type as follows:

- 01** Business - local & remote
- 02** Business - local
- 03** Residential
- 04** Remote e-mail only

The following parameter is passed to these state tables:

menu_rc

The return code for IMC_FIRSTTIME. Set this to 0 if IMC_FIRSTTIME completes successfully. Set it to 1 if the subscriber did not complete IMC_FIRSTTIME and must go through it again on the next sign on.

IMC_GETSTRG

This state table collects data keyed in on the telephone key pad. This data, put into GetDataBuffer, is normally terminated by #, *, or timeout.

Each calling state table is uniquely identified by a parameter. By examining this parameter you can take specific actions appropriate to that state table call.

Do not change the logic of this state table.

If you need to tune some of the calling state tables, change the timeout values on the GetKey functions. These changes should normally be made only by IBM Support personnel or IBM business partners who are experts on Message Center. The following table is provided for their use:

IMC_GETSTRG

Calling state table	Identifiers passed to IMC_GETSTRG
IMC_CALLER	11
IMC_DLIST	12, 13, 14, 15, 16, 17
IMC_FIRSTTIME	18, 19
IMC_GET_DEST	20, 21, 22
IMC_MAIN	23, 24, 25, 26, 27, 50
IMC_MSG_ATTR	28, 29, 30
IMC_SCHEDULE	31, 32, 33, 34, 35, 36, 37, 38, 39
IMC_START_AA	40
IMC_GET_NUM	41, 42

IMC_LANG

This state table handles the functions that allow subscribers to change the language of their application profile. IMC_LANG plays a menu of the languages supported by your implementation of Message Center, and allows the user to select one. The IMC_LANG state table supplied with Message Center is only an example, and must be updated when installed at your location.

The following parameter is passed to IMC_LANG:

lang_rc

The return code passed back to Message Center that defines what the system does next.

Always use ExitStateTable (0) from IMC_LANG. You must be careful only to set **lang_rc** to a valid return code for the particular menu requested. For a list of valid return codes, see the state table source code in directory /usr/lpp/dirTalk/sw/MessageCenter/st_src/lang.

If you want to implement dynamically-selectable languages do the following:

- Implement all the languages you require on DirectTalk.
- Make sure that you have a copy of Message Center in each of your languages.
- Rerecord the voice segment prompted by EnterLang so that the caller or subscriber is prompted to enter the appropriate selection for each of the supported languages.

If you do not intend to support dynamically-selected languages, disable this function by removing the prompts and GetKey actions for it from the menu state tables. Alternatively, you can change the prompts and logic in IMC_LANG to inform the user that no additional languages are currently available on the system.

IMC_LANG_C

This state table is similar to IMC_LANG, but it handles the dialog that enables a *caller* to change languages dynamically during a call to Message Center. The change lasts only for the duration of the call; it does not reset the language in the application profile.

IMC_LOGON

This state table is invoked as part of Message Center sign-on. It first plays each of the sign on prompts (for example, voice segment 6101, “Please enter your extension number, followed by #”). After playing the prompts, it passes control back to IMC_MAIN to perform the complex sign-on logic.

You can edit IMC_LOGON to provide a rich set of alternatives to the standard methods of logging on, including:

- Alternative ways of dealing with situations where Message Center receives no tone input. We provide code to explain to pulse-dial phone users that they should find a touch-tone phone or wait to be transferred to an operator.
The default in IMC_LOGON is not to transfer to an operator but simply to hang up after an explanation. You can enable the ability to transfer by changing a single line of code in IMC_LOGON.
- Internationalization of logon prompts. Message Center can provide a choice of languages for logon, or choose a default language based on the area or region code of the calling number.
- Logging on using speech recognition of digits. For this you need the IBM ARTIC960RxF Digital Trunk Resource Adapter (DTRA), feature code 6311, and DirectTalk Digit Speech Recognition software. We provide a set of sample voice segments (16101 to 16107) to help you customize Message Center for this function.
- Logging on using speaker verification software. We provide a set of sample voice segments (16108 to 16111) to help you customize Message Center for this function.
- Confirming the user ID entered (or assumed if the logon process bypasses entering an ID) by playing back the audio name of the user and requesting confirmation.
- Greeting callers in a personalized way when they call or enter their ID.
- Transferring subscribers to a helpdesk when they experience problems logging on (for example, when they enter an invalid password too many times).
- Reporting the number of messages a subscriber has received instead of playing a beep to indicate that there are new messages.

Note: Apart from the sample code to deal with pulse-dial phone users, we provide no code for any of these suggestions for ways in which you can customize IMC_LOGON. There is, however, some guidance on customization in the shipped ASCII source for the state table. If you want help with customizing IMC_LOGON, contact your IBM representative or business partner.

The following parameters are passed to IMC_LOGON from the startup state table:

MCSelectedProfile

See MCMainControl parameter. IMC_LOGON can change this parameter at the EnterID entry point to define the user ID to sign on to.

IMC_LOGON

LogonTimeouts

IMC_MAIN passes this parameter to IMC_LOGON to specify whether this is the first time that the TimeoutID entry point has been called.

IMC_MAIN calls IMC_LOGON at various state table entry points, each of which plays a different prompts, as follows:

EnterID

The prompt for users to enter their ID numbers. This is not called if MCMailControl is greater than 0.

InvalidID

The prompts played when the user provides an invalid ID number. This is not called if MCMailControl is greater than 0.

ConfirmID

Allows the ID entered, or automatically assigned, to be confirmed before the password is entered. The default code for IMC_LOGON simply returns at this point without playing a prompt.

(IDs can be automatically assigned when users, for example, press just # when calling from their own number.)

TimeoutID

The prompts played when Message Center detects no tones.

NewMsgBeep

The sound (beep) played when the mailbox has new messages. This is not called if there are no new messages or MCMailControl is -2.

EnterPW

The prompt for users to enter their password. This is not called if MCMailControl is 2.

InvalidPW

The prompts played when the user provides an invalid password (or if the ID provided is invalid and MCMailControl is less than 0).

TimeoutPW

The prompts played when the user provides no password.

UserFailHup

The prompts played if the user enters an invalid password the number of times defined in MaxPWAttempts.

MaxPWAttempts, passed from IMC_MAIN, defines the maximum number of invalid passwords that can be entered before Message Center disconnects the caller. A typical setting of this parameter would be 3.

SysFailLock

The prompts played when Message Center locks the user's mailbox because GlobalPWLimit has been exceeded.

GlobalPWLimit, passed from IMC_MAIN, defines the maximum cumulative number of invalid passwords across all profiles that can be entered before

Message Center stops access to all mailboxes. This limit could be triggered by, for example, a hacker systematically trying to sign on to a large number of mailboxes.

To disable global password limit checking, set this parameter to 0. A typical setting of this parameter is 100.

If GlobalPWLimit is exceeded, all subscribers are locked out of the system. If you set this parameter to a value other than 0, you will have to reset it regularly to prevent subscribers eventually being locked out of the system. To reset the global password failure count, see “Unlocking the system (changeuser)” on page 65.

UserFailLock

The prompts played when Message Center locks the user’s mailbox because ProfilePWLimit has been exceeded.

ProfilePWLimit, passed from IMC_MAIN, defines the cumulative maximum number of invalid passwords that can be entered over a series of sign-on attempts before Message Center disables the mailbox. The administrator can re-enable mailbox access. A typical value for this parameter is 7. To disable cumulative password limit checking by profile ID, set this parameter to 0.

IMC_LOGON can return using the following labels, which exit the state table with ExitStateTable set to the numbers shown in brackets. For example, Completed (0) exits the state table with ExitStateTable(0).

Completed (0)

The default behavior: the prompt has played and processing continues normally.

OK (1) IMC_LOGON’s validation found the user ID or password to be valid.

NOT_OK (2)

IMC_LOGON’s validation found the user ID or password to be invalid.

NO_RESULT (3)

IMC_LOGON tried to validate the user ID or password provided, but after a number of attempts (time-outs) failed to do so. This is therefore the final timeout; Message Center gives up, plays a prompt, and hangs up.

Close (7)

This indicates a hangup. Either the caller hung up while a prompt was playing or Message Center itself wants to hang up, for example, when a transfer has completed.

Problems (9)

Message Center encountered serious problems while executing IMC_LOGON. Message Center should log an error, tell the caller that an error has occurred, and hang up.

Comments in the ASCII source for the state table indicate which of these labels are valid for each state table entry point. Any invalid return codes are treated in the same way as **Problems (9)**.

IMC_MAIN

This is the main state table that calls other Message Center state tables. This is an internal state table and you cannot modify it.

The following parameters are passed by the startup state table to IMC_MAIN. They are set by assigning the values you selected into the appropriate local variables before invoking the IMC_MAIN state table. To see how this is done, see “IMC_STARTUP” on page 225 and “IMC_START_AA” on page 226.

AltVmailExt1, AltVmailExt2, and AltVmailExt3

You can have up to four extension numbers defined to call in to Message Center. The primary number is defined in VmailExtension; define the other numbers in AltVmailExt1, AltVmailExt2, and AltVmailExt3. If you do not want to use more than one extension number for Message Center, set the unused values to the same value as VmailExtension.

BackKey

The key to be used to skip backward when listening to a message. The default value is the **7** key. (This parameter is used only if the SimplePlay parameter is set to 0.)

FastKey

The key to be used to speed up playback when listening to a message. The default value is **6**. This parameter is used only if the SimplePlay parameter is set to 0.

ForwardKey

The key used to skip forwards when listening to a message. The default value is the **9** key. This parameter is used only if the SimplePlay parameter is set to 0.

LoudKey

The key used to increase the volume of playback when listening to a message. The default is **2**. This parameter is used only if the SimplePlay parameter is set to 0.

PauseKey

The key used to pause when listening to a message. The default value is the **8** key. This parameter is used only if the SimplePlay parameter is set to 0.

QuietKey

The key used to decrease the volume of playback when listening to a message. The default is **5**. This parameter is used only if the SimplePlay parameter is set to 0.

ResetGreeting

The number of the greeting to override a subscriber's setting. For example, if a subscriber number becomes dormant, you might want to set the greeting to a general announcement-only greeting.

SlowKey

The key used to slow down playback when listening to a message. The default value is the 4 key. This parameter is used only if the SimplePlay parameter is set to 0.

TPortalExt

This is the extension number that telephony portal users would dial when they wish to check their messages.

VmailExtension

The number of Message Center itself. If CalledNumber is the same as VmailExtension, Message Center assumes that the calling party wants to sign on to Message Center (rather than hear a greeting and leave a message).

If you are using IMC_STARTUP, you must set VmailExtension to the DID extension number you have allocated for Message Center.

You can set this value by changing the VoiceMailExtension setting in the Global Variation Modification section of MCIT.

IMC_MSG_CALL

This state table makes an outgoing call to deliver a voice message when a subscriber accesses Message Center from the World Wide Web and asks for the message to be delivered to a telephone handset. It is invoked by the Message Center Internet custom server, IMC_MsgServer.

The following parameters are passed to IMC_MSG_CALL:

CallerProfile

The profile ID containing the requested message.

MailBoxNum

The number of the mailbox in the profile ID containing the message (this is always set to 1).

MsgKey

The key of a message to be retrieved. This is the information found in the msg_key field in the VOICE_MSG_DATA_ID structure (described in *DirectTalk for AIX: Custom Servers*) or SV221 (described in *DirectTalk for AIX: State Tables, Prompts, and Voice Segments*).

MsgCreateTime

The time when the message to be retrieved was created. This is the information found in the msg_create_time field in the VOICE_MSG_DATA_ID structure (described in *DirectTalk for AIX: Custom Servers*) or SV222 (described in *DirectTalk for AIX: State Tables, Prompts, and Voice Segments*).

MsgDuration

The length (in ms) of the voice message. This is the information found in SV215 (described in *DirectTalk for AIX: State Tables, Prompts, and Voice Segments*).

IMC_MSG_CALL

PhoneNumber

The number to which the outgoing call should be made.

You might want to add additional checking to this state table, for example to stop messages being delivered to international numbers. If a call is not to be made, ExitStateTable (0) without making the call.

IMC_MSG_EXIT

This state table is used by IMC_CALLER to determine the correct destination profile ID and mailbox for the message which has been left. This is necessary because the recipient of the message might not have a local profile on the Message Center system. The recipient might be on a remote voice mail system or even be an Internet e-mail in-basket.

If you are using remote destinations, IMC_MSG_EXIT calls the IMC_GetEmsgBox custom server to discover the outgoing e-mail mailbox to use for this message.

The following parameters are passed to IMC_MSG_EXIT:

RemoteDest

A flag defining the location of the receiver profile (0 = local, 1 = remote).

SenderProf

Reserved for use by Message Center.

IMC_MSG_EXIT returns the following parameters:

LocalProf

The local profile to which the message should be sent. IMC_MSG_EXIT updates this parameter.

LocalMbox

The local mailbox to which the message should be sent. IMC_MSG_EXIT updates this parameter.

RemoteProf

The outgoing e-mail profile to which the message should be sent. IMC_MSG_EXIT updates this parameter.

RemoteMbox

The outgoing e-mail mailbox to which the message should be sent. IMC_MSG_EXIT updates this parameter.

msg_exit_rc

IMC_MSG_EXIT updates the following return codes:

- | | |
|----------|---------------------|
| 0 | Send to local only |
| 1 | Send to remote only |
| 2 | Send to both |
| 3 | Failed |

Always ExitStateTable(0).

IMC_NOTIFY

This state table handles notification to subscribers when they have a new message. It is a sample state table, and you might want to update it to work in your local environment.

The following parameters are passed to IMC_NOTIFY:

AckLevel

Whether acknowledgment of receipt has been requested:

- 0** Acknowledgment not requested
- 1** Acknowledgment requested

ActualSender

The actual sender of the message. This is not necessarily the same as the SenderProfile ID. For example, if the message is from an external source, the SenderProfile ID will be the AMIS receiver profile ID, but the actual sender will be the ID by which the remote sending mailbox is known.

DeliveryDate

The date of future delivery in the format YYYYMMDDHHMMSS. If the message is for immediate delivery, DeliveryDate is set to 00000000000000.

DistbnList

Whether the message was sent using a distribution list:

- 0** Not sent using distribution list
- 1** Sent using distribution list

ExtCallID

The external caller profile ID.

MsgType

The type of message being notified:

- A** External message received using AMIS analog transfer from another system
- B** Broadcast message
- D** External message received using digital transfer from another system
- E** End of subscriber call; this is not a new message, but signals that the subscriber has just completed a call to Message Center
- L** Left in response to your greeting
- R** Reply to your message
- S** Sent from within a Message Center session by a subscriber
- W** Message withdrawn by sender

IMC_NOTIFY

NotifyDestn

The destination to which the message is sent.

PrivLevel

The privacy level of the message:

- | | |
|----------|-----------------------------|
| 0 | Normal privacy |
| 1 | Message cannot be forwarded |

PrtyLevel

The priority level of the message:

- | | |
|-----------|--------------------|
| 10 | Emergency priority |
| 20 | Urgent priority |
| 30 | Normal priority |

SenderProfile

The profile ID from which the message was sent.

IMC_NOTIFY is supplied with Message Center as a sample state table; it uses the IMC_Notify custom server (see page 268) to generate a sendmail note containing the notification information.

IMC_OCALL_MAKE

This state table makes an outgoing call to notify a subscriber of new messages. You might want to customize it to work in your local environment. For example, you might use tone pagers which expect DTMF tones to be sent to inform the subscriber of the calling number from which the message came or the time of receipt of the message. The necessary dial actions can be added to this state table.

The following parameters are passed to IMC_OCALL_MAKE:

Backup_Phone_Number

The number on which to notify the subscriber if there is no reply from the Main_Phone_Number.

CallerProfile

The profile ID of the subscriber being notified.

MailBoxNum

The mailbox number associated with the CallerProfile. (For Message Center this is always mailbox 1.)

Main_Phone_Number

The number on which to notify the subscriber.

makecall_rc

The return code for this state table:

- | | |
|----------|----------------|
| 1 | Success |
| 2 | Invalid number |

3	Phone busy
4	Network busy
5	No reply
6	Outbound line problem
7	No lines
8	Active channel
9	Unexpected tone
10	Pager success
135	Problems encountered

Pager_Type

A code which identifies the type of pager for the Main_Phone_Number. If the number is not a pager number, Pager_Type is set to 0. If it is a tone pager, Pager_Type is set to 1.

Pager_Ref

The reference number, if needed, for the Main_Phone_Number pager.

Pager2_Type

A code which identifies the type of pager for the Backup_Phone_Number. If the number is not a pager number, Pager_Type is set to 0. If it is a tone pager, Pager_Type is set to 1.

Pager2_Ref

The reference number, if needed, for the Backup_Phone_Number pager.

IMC_OCALL_MENU

This state table handles the menu presented to a subscriber who successfully receives a notification outcall.

Typically the options presented to the subscriber are:

- Sign on to Message Center, press **1**
- Call back in 10 minutes, press **2**
- Terminate this call and notify me if another message is received, press **3**

The following parameters are passed to IMC_OCALL_MENU:

EntryPoint

OutdialKey is the only valid entry point.

menu_rc

The return code from this state table:

10	Sign on to Message Center
20	Delay - call back later
30	Abandon this notification

IMC_OCALL_MENU

40	Return to the start
50	Subscriber hung up
60	Timeout
135	Problems

IMC_OCALL_START

Use this startup state table during outcall notification when the subscriber chooses to sign on to Message Center. The functions, parameters, and return codes are the same as for IMC_STARTUP. Variable settings in IMC_OCALL_START should be the same as those in IMC_STARTUP (see page 225).

The following parameters are passed to IMC_OCALL_START:

main_rc

The return code from IMC_MAIN after it has been invoked by IMC_OCALL_START and completed execution.

OutdialProfile

The profile ID for the subscriber to whom the outcall is to be made.

IMC_RECORDCOMP2

Use this state table to record and review voice segments. You can record new prompts and replace the prompts supplied with Message Center.

To use IMC_RECORDCOMP2:

1. Create a DID application profile associated with IMC_RECORDCOMP2.
2. Dial the DID number. You will be asked for:
 - A password
 - The voice directory and ID of the voice segment you want to work with

Choose from the following menu options:

- Press **1** to record the voice segment
- Press **3** to listen
- Press **4** to delete
- Press **5** to change language
- Press **6** to change voice directory
- Press **7** to move to the previous voice segment
- Press **8** to move to any voice segment
- Press **9** to move to the next voice segment

IMC_REMCONF

When a message is addressed to a remote destination, this state table gives confirmation to the subscriber.

IMC_REMCONF plays the following prompt (voice segment number 6173), where *destination* is the numeric destination specified by the subscriber or the remote audio name, if available:

Your message will be sent to *destination*

The following parameters are passed to IMC_REMCONF:

SendDestn

The numeric string specified by the subscriber as the remote destination.

remconf_rc

The return code from IMC_REMCONF.

IMC_REMGRT

This state table plays the appropriate greeting for a remote subscriber who has no profile on this system. It is only called if the Remote Destination parameter in the Global Variation Modification section in MCIT is set to YES..

As supplied, this state table simply plays a default greeting which mentions the number which has been called. If you have access to the audio name or voice mail greeting of the remote subscriber, you can update this state table to provide a more personal greeting.

The following parameter is passed to IMC_REMGRT:

remgrt_rc

The return code from IMC_REMGRT.

IMC_REMMSGI

This state table plays the remote audio name and other message information (date and time sent, urgency, and so on) for a message received from a remote system.

The following parameters are passed to IMC_REMMSGI:

MsgType

The type of message (new, saved, or outgoing).

AudioProf

The true sending profile.

AudioBox

The sending mailbox number.

IMC_REMMSGI

CallingID

The profile with which the message is associated. For external messages, this is the external caller profile; for fax messages, this is the fax profile.

remmsgi_rc

The return code from IMC_REMMSGI.

IMC_SBR_MENU

This state table handles the general menus available to Standard subscribers who have signed on to Message Center. IMC_SBR_MENU plays all the necessary menu prompts, collects the key entered by the subscriber in response to a prompt, and passes the meaning of that keystroke back to Message Center.

Note: Use IMC_SBR_MENU for general menus for Standard subscribers. For the other types of subscriber, use one of IMC_SBR_MENU_01 to IMC_SBR_MENU_04, as described on page 221.

There are also menu-specific state tables. For Standard subscribers these are:

- “IMC_SBR_MENU_CH” on page 221 for call-handling menus
- “IMC_SBR_MENU_EM” on page 222 for e-mail menus
- “IMC_SBR_MENU_MP” on page 222 for message menus
- “IMC_SBR_MENU_NB” on page 223 for notice board menus
- “IMC_SBR_MENU_NS” on page 223 for notification schedule menus

For the other types of subscriber, they are:

- “IMC_SBR_MNU_SCH” on page 223 for call-handling menus
- “IMC_SBR_MNU_SEM” on page 224 for e-mail menus
- “IMC_SBR_MNU_SMP” on page 224 for message menus
- “IMC_SBR_MNU_SNB” on page 224 for notice board menus
- “IMC_SBR_MNU_SNS” on page 224 for notification schedule menus

Always use ExitStateTable (0) from IMC_SBR_MENU. Be careful to set SV74 to a valid return code for the particular menu requested. For a list of valid return codes, see the state table source code in directory /usr/lpp/dirTalk/sw/MessageCenter/st_src/sbr_menu. Note that there are certain standard or atomic return codes which can be used from any menu. This enables any of the main functions of Message Center to be located on any menu.

You should not normally need to change or replace IMC_SBR_MENU. However, if, for example, you wanted to change the options on the main menu so that **4** was call-handling and **5** was personal options (the opposite to how IMC_SBR_MENU is supplied), you would need to:

1. Re-record the voice segments which are used for the main menu so that the subscriber is prompted to press **4** for call-handling and **5** for personal options.
2. Change the GetKey statement so that IMC_SBR_MENU returns CallHandle on pressing **4** and Other on pressing **5**.

The default key usage in the menus in IMC_SBR_MENU is consistent with the International Standard ISO/IEC 13174.

Every menu in IMC_SBR_MENU has a help prompt associated with it. As supplied, the help prompt is the same as the normal prompt. However, you can tailor the system so that the help prompt is more extensive than the normal prompt. For example, on the listen menu, after listening to a message you might mention only three options on the normal prompt (delete, listen, and next). But if subscribers pressed **0**, they would hear the help prompt which had all the options. This lets you make Message Center appear to be a very simple system to most subscribers, but retain all its powerful functions for those subscribers who need them.

IMC_SBR_MENU_01 to IMC_SBR_MENU_04

These state tables serve the same function as IMC_SBR_MENU, but are used for subscribers other than Standard. The number represents the subscriber type as follows:

- 01** Business - local & remote
- 02** Business - local
- 03** Residential
- 04** Remote e-mail only

Always use ExitStateTable (0) from IMC_SBR_MENU_01 to IMC_SBR_MENU_04. Be careful to set SV74 to a valid return code for the particular menu requested. For a list of valid return codes, see the state table source code in directory `/usr/lpp/dirTalk/sw/MessageCenter/st_src/sbr_menu_xx`.

IMC_SBR_MENU_09

This state table serves the same function as IMC_SBR_MENU, but is used for telephony portal.

Always use ExitStateTable (0) from IMC_SBR_MENU_09. Be careful to set SV74 to a valid return code for the particular menu requested. For a list of valid return codes, see the state table source code in directory `/usr/lpp/dirTalk/sw/MessageCenter/st_src/sbr_menu_09`.

IMC_SBR_MENU_CH

This state table is similar to IMC_SBR_MENU, but is specifically for dealing with the call handling menus. IMC_SBR_MENU_CH plays all the necessary menu prompts for call-handling menus, collects the key entered by the Standard subscriber in response to a prompt, and passes the meaning of that keystroke back to the IMC_NUM_MGR state table.

Note: Use IMC_SBR_MENU_CH for Standard subscribers. For the other types of subscriber, use IMC_SBR_MNU_SCH, as described on page 223.

IMC_SBR_MENU_CH

Always use ExitStateTable (0) from IMC_SBR_MENU_CH. Be careful to set SV74 to a valid return code for the particular menu requested. For a list of valid return codes, see the state table source code in directory /usr/lpp/dirTalk/sw/MessageCenter/st_src/sbr_menu_ch. Note that there are certain standard or atomic return codes which can be used from any menu. This enables any of the main functions of Message Center to be located on any menu.

IMC_SBR_MENU_EM

This state table is similar to IMC_SBR_MENU, but is specifically for dealing with the e-mail preference menus. IMC_SBR_MENU_EM plays all the necessary menu prompts for e-mail preference menus, collects the key entered by the Standard subscriber in response to a prompt, and passes the meaning of that keystroke back to the IMC_EMAIL_PREFS state table.

Note: Use IMC_SBR_MENU_EM for Standard subscribers. For the other types of subscriber, use IMC_SBR_MNU_SEM, as described on page 224.

Always use ExitStateTable (0) from IMC_SBR_MENU_EM. Be careful to set SV74 to a valid return code for the particular menu requested. For a list of valid return codes, see the state table source code in directory /usr/lpp/dirTalk/sw/MessageCenter/st_src/sbr_menu_em. Note that there are certain standard or atomic return codes which can be used from any menu. This enables any of the main functions of Message Center to be located on any menu.

IMC_SBR_MENU_MP

This state table is similar to IMC_SBR_MENU, but is specifically for dealing with the message preference menus. IMC_SBR_MENU_MP plays all the necessary menu prompts for message preference menus, collects the key entered by the Standard subscriber in response to a prompt, and passes the meaning of that keystroke back to the IMC_MSG_PREFS state table.

Note: Use IMC_SBR_MENU_MP for Standard subscribers. For the other types of subscriber, use IMC_SBR_MNU_SMP, as described on page 224.

Always use ExitStateTable (0) from IMC_SBR_MENU_MP. Be careful to set SV74 to a valid return code for the particular menu requested. For a list of valid return codes, see the state table source code in directory /usr/lpp/dirTalk/sw/MessageCenter/st_src/sbr_menu_mp. Note that there are certain standard or atomic return codes which can be used from any menu. This enables any of the main functions of Message Center to be located on any menu.

IMC_SBR_MENU_NB

This state table is similar to IMC_SBR_MENU, but is specifically for dealing with the notice board menus. IMC_SBR_MENU_NB plays all the necessary menu prompts for notice board menus, collects the key entered by the Standard subscriber in response to a prompt, and passes the meaning of that keystroke back to the IMC_NOTIC_BOARD state table.

Note: Use IMC_SBR_MENU_NB for Standard subscribers. For the other types of subscriber, use IMC_SBR_MNU_SNB, as described on page 224.

Always use ExitStateTable (0) from IMC_SBR_MENU_NB. Be careful to set SV74 to a valid return code for the particular menu requested. For a list of valid return codes, see the state table source code in directory /usr/lpp/dirTalk/sw/MessageCenter/st_src/sbr_menu_nb. Note that there are certain standard or atomic return codes which can be used from any menu. This enables any of the main functions of Message Center to be located on any menu.

IMC_SBR_MENU_NS

This state table is similar to IMC_SBR_MENU, but is specifically for dealing with the notification schedules menus. IMC_SBR_MENU_NS plays all the necessary menu prompts for notification schedules menus, collects the key entered by the Standard subscriber in response to a prompt, and passes the meaning of that keystroke back to the IMC_SCHEDULE state table.

Note: Use IMC_SBR_MENU_NS for Standard subscribers. For the other types of subscriber, use IMC_SBR_MNU_SNS, as described on page 224.

Always use ExitStateTable (0) from IMC_SBR_MENU_NS. Be careful to set SV74 to a valid return code for the particular menu requested. For a list of valid return codes, see the state table source code in directory /usr/lpp/dirTalk/sw/MessageCenter/st_src/sbr_menu_ns. Note that there are certain standard or atomic return codes which can be used from any menu. This enables any of the main functions of Message Center to be located on any menu.

IMC_SBR_MNU_SCH

This state table serves the same function as IMC_SBR_MENU_CH, but is used for Business - local & remote, Business - local, Residential, and Remote e-mail only subscribers.

Always use ExitStateTable (0) from IMC_SBR_MNU_SCH. Be careful to set SV74 to a valid return code for the particular menu requested. For a list of valid return codes, see the state table source code in directory /usr/lpp/dirTalk/sw/MessageCenter/st_src/sbr_mnu_sch. Note that there are certain standard or atomic return codes which can be used from any menu. This enables any of the main functions of Message Center to be located on any menu.

IMC_SBR_MNU_SEM

This state table serves the same function as IMC_SBR_MENU_EM, but is used for Business - local & remote, Business - local, Residential, and Remote e-mail only subscribers.

Always use ExitStateTable (0) from IMC_SBR_MNU_SEM. Be careful to set SV74 to a valid return code for the particular menu requested. For a list of valid return codes, see the state table source code in directory /usr/lpp/dirTalk/sw/MessageCenter/st_src/sbr_mnu_sem. Note that there are certain standard or atomic return codes which can be used from any menu. This enables any of the main functions of Message Center to be located on any menu.

IMC_SBR_MNU_SMP

This state table serves the same function as IMC_SBR_MENU_MP, but is used for Business - local & remote, Business - local, Residential, and Remote e-mail only subscribers.

Always useExitStateTable (0) from IMC_SBR_MNU_SMP. Be careful to set SV74 to a valid return code for the particular menu requested. For a list of valid return codes, see the state table source code in directory /usr/lpp/dirTalk/sw/MessageCenter/st_src/sbr_mnu_smp. Note that there are certain standard or atomic return codes which can be used from any menu. This enables any of the main functions of Message Center to be located on any menu.

IMC_SBR_MNU_SNB

This state table serves the same function as IMC_SBR_MENU_NB, but is used for Business - local & remote, Business - local, Residential, and Remote e-mail only subscribers.

Always use ExitStateTable (0) from IMC_SBR_MNU_SNB. Be careful to set SV74 to a valid return code for the particular menu requested. For a list of valid return codes, see the state table source code in directory /usr/lpp/dirTalk/sw/MessageCenter/st_src/sbr_mnu_snb. Note that there are certain standard or atomic return codes which can be used from any menu. This enables any of the main functions of Message Center to be located on any menu.

IMC_SBR_MNU_SNS

This state table serves the same function as IMC_SBR_MENU_NS, but is used for Business - local & remote, Business - local, Residential, and Remote e-mail only subscribers.

Always use ExitStateTable (0) from IMC_SBR_MNU_SNS. Be careful to set SV74 to a valid return code for the particular menu requested. For a list of valid return codes, see the state table source code in directory /usr/lpp/dirTalk/sw/MessageCenter/st_src/sbr_mnu_sns. Note that there are certain

standard or atomic return codes which can be used from any menu. This enables any of the main functions of Message Center to be located on any menu.

IMC_STARTUP

This state table starts Message Center. It is an example of a DID voice-messaging application. IMC_STARTUP calls Message Center using the InvokeStateTable action to invoke IMC_MAIN. For information on modifying IMC_STARTUP when you install Message Center, see “10. Modifying the IMC_MessageCenter.ini file” on page 7.

Additional functions in IMC_STARTUP

IMC_STARTUP answers the incoming call, and provides the opportunity for additional processing to be added before Message Center becomes involved.

For example, if you want calls to certain numbers to be passed to an application other than Message Center, you can check the called number in IMC_STARTUP, and invoke the preferred application if the call is not for Message Center.

Another common example is where calls have been extended from the operator. Unfortunately, your switch can pass the operator's number to DirectTalk as the calling number. This means that messages left by callers who have been connected by the operator appear in the Message Center headers as having been left by the operator, and not the original caller.

You can correct this by checking the calling number in IMC_STARTUP. If it is the operator's number, you can reset it to the external/unknown caller profile (usually 999999) before passing it to Message Center.

Implementing multiple voice mailboxes on an extension

Message Center is usually implemented with one voice mailbox for each extension, where the application profile ID is identical to the extension number. If you have subscribers who share an extension, you can implement DID for the Message Center greeting by updating IMC_STARTUP as follows.

If, for example, extension number 4300 is shared by three subscribers, create profiles 43001, 43002, and 43003. Make sure that the subscribers know their own voice mailbox number and password, and have recorded an audio name. When a call is received for extension 4300, your application checks for the existence of this profile in IMC_STARTUP without success. It then checks for the existence of 43001 (by concatenating the 1) and finds that it exists. Your application then plays a menu, which allows the caller to select from the list of audio names for profiles 43001, 43002, and 43003. When the caller selects an audio name, your application passes the relevant profile to Message Center as the called number. Message Center then plays the correct greeting and handles the call.

Note: For some switches, if the profile ID is not exactly identical to the extension number, additional programming might be required to operate the message waiting indicator on the telephone handset. No parameters are passed to this state table.

IMC_START_AA

Message Center is an invoked application, that is, it must be called by another application. This means that you can imbed Message Center in other voice applications running under DirectTalk. To make Message Center operational, you must create an application to invoke it.

Two sample invoking state tables, IMC_STARTUP and IMC_START_AA, are supplied with Message Center. IMC_STARTUP is an example of a DID voice-messaging application; IMC_START_AA is an example of an auto-attendant application. If you plan to use Message Center in either of these ways, you can change the sample application to work in your environment.

IMC_STARTUP and IMC_START_AA call Message Center using the InvokeStateTable action to invoke IMC_MAIN. See “IMC_LOGON” on page 209.

For information on modifying IMC_START_AA when you install Message Center, see “10. Modifying the IMC_MessageCenter.ini file” on page 7.

No parameters are passed to this state table.

IMC_START_QMG

This is the startup state table for the Message Center **quick message facility**. This allows callers to send a message directly to a Message Center voice mailbox, without signing on as a Message Center subscriber. Typically, a caller dials directly to a number associated with a profile linked to this state table.

The caller is prompted for the destination voice mailbox number and allowed to leave a message. The function is similar to that provided for subscribers in the *Send a Message* dialog (option 2 on the Message Center main menu).

One advantage of the quick message facility is that it allows the caller to specify the destination either as a DirectTalk profile ID or as the digit name associated with that profile. This can be used to enter the recipient’s name rather than their voice mailbox number.

No parameters are passed to IMC_START_QMG.

IMC_STATS

This state table reports statistics from Message Center. IMC_STATS collects detailed information about each action and saves it in a system variable, SV81. IMC_STATS takes the information from SV81 and writes a record to the IMC_Stats.log file at the end of the call. Each record is in the format:

SDyyymmdd:SThmmss:CI nnnnnn:CNmmmmmm:SWx:XX:YY:ZZaaaa:

Where:

- Each reported event is delimited by a colon (:)

- SD is the start date flag followed by the system date when the call started
- ST is the start time flag followed by the system time when the call started
- CI is the calling ID flag followed by the calling ID
- CN is the called number flag followed by the called number
- SW is the start day of week flag followed by the day of the week that the call started
- XX is a statistics flag (see Table 14)
- YY is a statistics flag
- ZZ is a statistics flag with some associated data

When there is too much data for SV81, an overflow occurs. The current value of SV81 is written to the log, and SV81 is cleared and used again for the remaining statistical information.

IMC_STATS can also call the IMC_Stats custom server to create statistics reports and summaries. For more information see “IMC_Stats” on page 279. You can tailor IMC_STATS and IMC_Stats. For example, if you charge for voice mailbox usage or call-transfer on your Message Center system, you can develop an interface to your billing system.

Note: In Message Center a subscriber can exit to the sign-on procedure, then either the same subscriber or a different one can sign on. This process can be repeated indefinitely during the same telephone call.

IMC_Stats produces a separate statistical record for each session. Table 14 lists and describes all the statistics flags.

Table 14. IMC_STATS flags and descriptions

AA	Subscriber set auto_save_msg to value specified.
AN	Subscriber deleted an audio name.
AO	Subscriber's announcement-only greeting played to caller.
AP	Subscriber appended comment to message.
AS	Default announcement-only system greeting played to caller.
BA	Subscriber set bilingual_grt to value specified.
BC	Call forwarded to Message Center because subscriber's line was busy.
BG	Subscriber's busy greeting played to caller.
CA	Subscriber changed audio name.
CB	Subscriber set clock_pref to value specified.
CC	Call successfully transferred by caller to another number.
CF	Call transfer by caller to another number failed.
CG	Subscriber changed greeting.
CI	Calling number is number specified. If unknown, set to external caller ID.
CN	Number originally called is number specified.
CP	Subscriber changed password.

Table 14. IMC_STATS flags and descriptions (continued)

CS	Subscriber tried to call sender of message.
CX	Last transfer number requested by caller is number specified.
DA	Attempt to set assistant number failed.
DB	Subscriber specified destination of message by dialing by name.
DC	Call successfully transferred by caller to assistant number.
DF	Call transfer by caller to assistant number failed.
DG	Subscriber deleted greeting specified.
DI	Caller disconnected on request.
DN	Caller requested transfer to assistant number specified.
DS	Subscriber disconnected on request.
DV	Subscriber selected to work with deleted voice messages.
DU	Subscriber requested to set assistant number.
EA	Subscriber told synchronization not allowed.
EB	Subscriber set synch user to value specified.
EC	An external call; the default if source of call not known.
ED	Subscriber set synch type to value specified.
EE	Subscriber set message destination preference specified.
EF	Failure occurred sending e-mail to fax machine.
EG	Subscriber set message destination type specified.
EL	Subscriber requested exit to sign-on.
EM	Message sent as e-mail.
EN	Date when call ended was date specified.
ER	Subscriber selected to receive remote e-mail messages.
ES	e-mail successfully sent to fax machine specified.
ET	Call ended at time specified.
EW	Day of week on which call ended was day specified.
FA	Subscriber entered fax number specified.
FB	Subscriber failed to set fax number.
FC	Fax successfully received.
FD	Subscriber successfully set fax number.
FE	Subscriber deleted fax number.
FF	Failure occurred receiving fax.
FG	Subscriber entered temporary fax number specified.
FH	Subscriber failed to set temporary fax number.
FI	Subscriber successfully set temporary fax number.
FJ	Subscriber deleted temporary fax number.
FK	Failure occurred sending fax to fax machine.

Table 14. IMC_STATS flags and descriptions (continued)

FS	Fax successfully sent or received.
FT	Subscriber went through first time sign-on procedure.
GA	Announcement-only greeting selected.
GB	Alternate announcement-only greeting selected.
GH	Greeting header played to caller.
GO	System announcement-only greeting selected.
GP	Message Center decided that greeting should be played to caller.
GR	Default remote greeting played to caller.
GS	System greeting selected.
G1	Personal greeting (specified) selected.
IA	An IMAP4 client connected to Message Center.
IB	The subscriber created an IMAP4 folder.
IC	The subscriber deleted an IMAP4 folder.
IC	Internal call.
ID	The subscriber accessed messages.
IE	The subscriber marked a message for deletion.
IG	The subscriber purged all messages marked for deletion.
IH	The subscriber moved a message from one IMAP4 folder to another.
II	The subscriber marked a new message as read.
IJ	The IMAP4 client has disconnected.
IP	Subscriber entered invalid password while signing on.
JA	Caller tried to jump out to PageMe number.
JD	Caller tried to jump out to assistant number.
JO	Sign on to Message Center.
JP	Caller tried to jump out to operator number.
JR	Caller tried to jump out to ReachMe number.
JX	Caller tried to jump out by transferring to another number.
LC	Subscriber or caller changed language (to language specified).
LD	Subscriber deleted distribution list ID specified.
LG	Subscriber successfully signed on to Message Center.
LI	Subscriber created distribution list ID specified.
LN	Subscriber logged on without supplying profile ID.
LO	Subscriber tried to log on.
LP	Subscriber logged on without supplying password.
MA	Subscriber listened to message.
MB	Caller chose to record another message for same subscriber in same call.
MC	Subscriber created distribution list member specified.

Table 14. IMC_STATS flags and descriptions (continued)

MD	Subscriber deleted message.
ME	Caller re-recorded message.
MF	Caller could not leave message because subscriber's voice mailbox was full.
MG	Message left by caller. This is a subset of MO.
MH	Caller listened to message just recorded in subscriber's voice mailbox.
MI	Subscriber could not sign on because voice mailbox already in use.
MJ	Message sent to external voice mail system.
ML	Mailbox locked.
MM	Subscriber deleted distribution list member specified.
MN	Message sent by subscriber to number specified.
MO	Caller recorded message.
MP	Subscriber sent reply to message.
MQ	Subscriber sent message to distribution list ID specified.
MR	Subscriber pressed 1 to receive messages.
MS	Subscriber signed on to Message Center; was warned of full voice mailbox.
MT	Caller abandoned message without saving. This is a subset of MO.
MU	Caller left message and terminated by hang-up. This is a subset of MG.
MW	Message forwarded to subscriber.
NA	Subscriber set delete_new_msgs to value specified.
NB	Subscriber saved new notice board.
NC	Subscriber deleted notice board.
ND	Notice board played to caller.
NR	Call forwarded to Message Center because there was no reply from subscriber's extension, or calls are permanently forwarded to Message Center. This is also the default if the reason for forwarding to Message Center is not known.
OA	Subscriber entered operator number specified.
OB	Subscriber failed to set operator number.
OC	Call successfully transferred by caller to operator number.
OD	Subscriber deleted outgoing message.
OE	Subscriber successfully set operator number.
OF	Call transfer by caller to operator number failed.
OG	Subscriber deleted operator number.
OH	Subscriber listened to outgoing message.
OM	Subscriber checked outgoing mail.
ON	Caller requested transfer to operator number specified.
ON	Caller requested transfer to operator number specified.
PA	Subscriber entered pager number specified.

Table 14. IMC_STATS flags and descriptions (continued)

PB	Subscriber set play_headers to value specified.
PC	Subscriber failed to set pager number.
PD	Caller disconnected because maximum number of password attempts exceeded (number specified).
PE	Message Center encountered technical problem and terminated call.
PF	Caller not transferred to nominated pager number.
PG	Subscriber deleted pager number.
PH	Subscriber entered temporary pager number specified.
PI	Subscriber failed to set temporary pager number.
PJ	Subscriber successfully set temporary pager number.
PK	Subscriber deleted temporary pager number.
PL	Subscriber entered pager reference number specified.
PM	Subscriber deleted pager reference number.
PN	Caller successfully transferred to pager number specified.
PO	Subscriber entered temporary pager number specified.
PP	Subscriber successfully set pager number.
PQ	Subscriber deleted temporary pager reference number.
PR	Subscriber added comment to beginning of message.
PS	Caller successfully transferred to pager number.
P1	Subscriber's personal greeting (specified) played to caller.
RA	Subscriber deleted call-forwarding number.
RC	Call transfer to referral number by caller succeeded.
RF	Call transfer to referral number by caller failed.
RG	Caller was played default remote greeting.
RH	Subscriber failed to set ReachMe number.
RI	Caller not transferred to ReachMe number.
RJ	Subscriber successfully set ReachMe number.
RK	Subscriber deleted ReachMe number.
RL	Subscriber entered temporary ReachMe number specified.
RM	Caller transferred to ReachMe number specified.
RN	Caller transferred to referral number specified.
RO	Subscriber entered ReachMe number specified.
RP	Attempt to set call-forwarding (referral) number failed.
RQ	Subscriber failed to set temporary ReachMe number.
RS	Subscriber successfully set call-forwarding number.
RT	Message Center tried to connect caller to subscriber's call-forwarding number.
RU	Subscriber requested to set referral number specified.
RV	Subscriber successfully set temporary ReachMe number.

Table 14. IMC_STATS flags and descriptions (continued)

RW	Subscriber deleted temporary ReachMe number.
SA	Subscriber set send_msg_address to value specified.
SC	Call successfully transferred by subscriber to another number.
SD	Date when call started.
SF	Subscriber failed to transfer to another number.
SG	Default standard system greeting played to caller.
SH	Subscriber handled or accessed notification schedules.
SM	Message followed by hang-up shorter than minimum message time for this installation; not saved.
SN	Last attempted transfer number requested by subscriber.
ST	Start time of call was time specified.
SW	Day of week on which call took place was day specified.
TC	Call successfully transferred by subscriber to sender of message.
TE	Subscriber toggled to expert prompts.
TF	Subscriber failed to transfer to sender of message.
TN	Last number to which subscriber requested transfer to sender of message.
TO	Message Center terminated call because caller or subscriber did not respond.
TS	Subscriber toggled to standard prompts.
UE	User exit invoked from Message Center main menu.
UI	Application profile ID of subscriber signed on to Message Center (if sign-on takes place during call) was ID specified.
VM	VPIM message arrived for a subscriber
WA	The subscriber logged into Message Center via the WWW interface
WB	The subscriber went to their mail on WWW.
WC	The subscriber went to their preferences on WWW
WD	The subscriber went to their personal directory on WWW
WE	The subscriber added an entry to their personal directory.
WG	The subscriber deleted an entry from their personal directory
WH	The subscriber modified an entry in their personal directory.
WI	The subscriber marked a message as saved on WWW.
WJ	The subscriber deleted a message via the WWW.
WK	The subscriber listened to a message via the WWW.
WL	The subscriber read an e-mail on a remote server via the WWW.
WM	The subscriber deleted a remote e-mail via the WWW.
WN	The subscriber marked a new message as read via the WWW.
WO	The subscriber modified one of their preferences.
WW	Subscriber chose <i>Work with greetings</i> .
XC	Subscriber tried to transfer call to another number.

IMC_XFER

This state table provides feedback to the subscriber or caller in the form of prompts both before and after a transfer. For example if a call transfer is not successful, or is not permitted, IMC_XFER can explain this to the caller.

See also “IMC_XFER_DO”.

IMC_XFER_DO

This state table is used by Message Center to transfer calls. You might need to edit IMC_XFER_DO:

- To enable call transfer to work properly with the particular switch to which DirectTalk is connected
- To choose to use DirectTalk **tromboning**

Enabling call transfer

If you decide to change the way that call transfer is implemented, you must understand fully how the both the switch and DirectTalk expect transfer to happen; see *Chapter 8. State table actions - TransferCall in DirectTalk for AIX: State Tables, Prompts, and Voice Segments*.

The version of IMC_XFER_DO supplied with Message Center uses a simple TransferCall state table action for call transfer. This might work with your telephone switch, but if your switch requires a different procedure to effect call transfer from DirectTalk, you will need to change IMC_XFER_DO.

Using tromboning

Tromboning means connecting the voice channel of an inbound call with the voice channel of an outbound call. You can use this either as a substitute for switch transfer, or to add the ability for subscribers to continue at the menu point from where they transferred, as if they had never left Message Center.

To use tromboning instead of the TransferCall action, just change the GOTO Transfer; step to a GOTO Trombone; step.

Note: This is how the steps appear in the ASCII state table code. In the DirectTalk graphical state table editor, the steps appear as DoNothing steps. We recommend that you edit the ASCII state table code.

If your switch doesn't support transfer at all, and you want to use tromboning as a substitute, change the GOTO. If your switch supports transfer, but you still want to enable subscribers to return to the Message Center menus after a transfer occasionally, you might want to add a GOTO Trombone for the CALLSENDER and USERXFER XferReasons (see “The IMC_XFER_DO parameters” on page 234).

IMC_XFER_DO

Note: Transferring using a switch lets you play various prompts to the called party before connection (in Message Center this is handled in IMC_XFER_DO). Using tromboning, you must enable this playing of prompts in code in the IBMTromboneOut state table.

I You also need to follow the DirectTalk instructions to get tromboning working. First, you
I need to ensure that your DirectTalk system has the appropriate PTF applied. For
I DirectTalk Version 2 Release 2, you need PTF U463092.

The trombone application is IBM_Trombone.imp, and you'll find it in the DirectTalk \$VAE/sw/samples directory. You install it by importing it like any other DirectTalk application. Once you've done so, either re-start DirectTalk or start the IBM_Trombone_Custom_server from the Custom Server Manager window.

If you want to know more about the trombone application, look in the DirectTalk \$CUR_DIR/ca/IBM_Trombone_Custom_Server_dir directory for the PDF file IBM_Trombone.pdf.

Other changes to call transfer

IMC_XFER_DO is also the place to put any additional edits you might want to apply to transfer-call actions. For example, you might have subscribers whose class of service does not allow them to transfer calls to the public network. In this case you might put in an edit for this class of service that checks to see if the requested call transfer is to a public network number. If it is, you would skip directly to return invalid from IMC_XFER_DO, bypassing the TransferCall action.

There are many additional possibilities for edits to control call transfer from Message Center. For example, the maximum length of a number to which jump out is requested could be set to four.

The IMC_XFER_DO parameters

Use the following parameters, passed to IMC_XFER_DO, to specify your edit conditions:

XferNumber

The number to which call transfer is being requested.

XferReason

The reason for requesting the call transfer. There are nine possible reasons for a call transfer to be requested from Message Center:

CALLSENDER

The subscriber has asked to be connected to the sender of a message.

DEPUTY

A caller has asked to jump out of the greeting/message dialog and transfer to the called party's nominated assistant.

FAX

An incoming fax call has been received by Message Center and needs to be transferred to a fax machine.

JUMPOUT

A caller has asked to jump out of the greeting/message dialog and transfer to XferNumber. The caller might have left a message before requesting jump out.

OPERATOR

A caller has requested to jump out of the greeting/message dialog and transfer to the operator.

REACHME

A caller has requested to jump out of the greeting/message dialog and transfer to the subscriber's ReachMe number.

REFERRAL

The subscriber has requested Message Center to transfer the caller to this number in preference to playing the greeting. However, the greeting is to be played if the call is not successfully transferred.

PAGEME

A caller has requested to jump out of the greeting/message dialog and transfer to the subscriber's pager number.

USERXFER

The subscriber has requested a transfer out of Message Center to another number.

You can also use the DirectTalk system variables:

SV20 For all the XferReasons except CALLSENDER and USERXFER, this contains the number of the caller (if the caller has a mailbox on the system), or the external caller profile (999999 by default). For CALLSENDER and USERXFER, this contains the number of the subscriber mailbox.

SV427 - SV429

The caller class of service available when SV20 and SV32 have been set (see "Appendix E. DirectTalk system variables used by Message Center" on page 283).

SV25 For all the XferReasons except CALLSENDER and USERXFER, this contains the number of the subscriber mailbox being called.

SV497 - SV499

The receiver class of service available when SV25 and SV33 have been set (see "Appendix E. DirectTalk system variables used by Message Center" on page 283).

IMC_XFER_DO

Appendix D. The Message Center custom servers

This chapter gives an overview of the Message Center custom servers. The custom servers are used to provide additional functions in Message Center that cannot be provided by state tables.

Table 15 lists all the custom servers, with links to the pages where they are described in detail. The descriptions begin on page 239 with a brief introduction.

Table 15. Message Center custom servers

Message Center custom server name	Description	Page
IMC_AcuVoice_TTS	Allows state tables to use the AcuVoice Speech Synthesizer for text-to-speech.	239
IMC_Admin	Provides command-line administration functions for day-to-day management of Message Center.	240
IMC_Attachment	Handles fax and text attachments.	242
IMC_Broadcast	Broadcasts messages to large numbers of subscribers.	243
IMC_Brooktrout	Supports fax transmission and reception using the Brooktrout TR114 FAX card.	244
IMC_ByName	Supports the dial-by-name function in Message Center.	246
IMC_CA_Monitor	Monitors the list of custom servers which should be running on the system, and restarts them if necessary.	247
IMC_Change_Lang	Changes the language in an application profile.	248
IMC_CMCServer	Handles special integrated messaging with Lotus Notes.	248
IMC_CS_Control	Enables command-line control of DirectTalk custom servers.	249
IMC_Delete_Msg	Deletes messages automatically after a specified number of days.	250
IMC_DeleteVoiceMessage	Enables undeleting of messages by replacing the state table DeleteVoiceMessage action.	252
IMC_Directory	Handles personal directories used by subscribers while checking e-mail on IMAP4 or POP3 servers. Used by the Web interface for personal directory maintenance.	253
IMC_Dlist	Creates a distribution list from a standard text file.	253
IMC_DlistNames	Records and plays distribution list names.	255
IMC_DTMail_Migrate_V2_1	Migrates Message Center data from releases of IBM DirectTalkMail when it was a feature of IBM DirectTalk.	295
IMC_GetEmsgBox	Selects an outgoing mailbox when sending messages to external destinations.	255
IMC_Getmail	Converts incoming e-mail containing voice and fax attachments into voice messages.	256
IMC_GetProf	Returns application profiles sequentially for use by housekeeping routines.	257

custom servers

Table 15. Message Center custom servers (continued)

Message Center custom server name	Description	Page
IMC_GetPwd	Looks up and calculates the expiry date of a subscriber's password.	258
IMC_GlobalVariables	Retrieve IMC_MessageCenter.ini configuration settings for use in state tables	258
IMC_Greetings	Allows caller options to be customized, depending on the greeting a subscriber has selected.	259
IMC_IMAP4_Client	IMAP4 interface for connecting to IMAP4-compliant e-mail servers.	260
IMC_IMAP4_Server	IMAP4 interface to allow IMAP4-compliant e-mail clients to access Message Center voice messages.	261
IMC_LDAP_Client	LDAP interface for accessing LDAP- compliant directory servers	261
IMC_LogError	Logs an error in the DirectTalk error log if Message Center has a technical problem and cannot complete a caller or subscriber function.	263
IMC_MAO	Schedules and manages the multiple AMIS output lines of the AMIS-Analog external messaging function.	263
IMC_MessageCentreAPI	Message Center interface for Java beans API and WWW functionality	264
IMC_MoveProfile	Moves one or more subscribers to a new extension or system.	264
IMC_MsgClient	Processes Web browser requests, passing them to IMC_MsgServer. Note: IMC_MsgClient is not a <i>true</i> custom server; it runs on the Web server.	265
IMC_MsgServer	Lets subscribers access their Message Center mailboxes and messages over the internet.	266
IMC_Notify	Receives notifications from the IMC_NOTIFY state table and sends e-mail notifications for new messages.	268
IMC_OneCall	Provides fax detection during recording for small (fewer than 1000 subscribers) voice messaging databases.	269
IMC_Pager	Lets you use your own alphanumeric pagers. (A user exit from the IMC_OCALL_MAKE state table.)	270
IMC_Password	Enforce password reuse rules	270
IMC_PhraseSlicer	Breaks text into multiple phrases for playback using IBM ViaVoice text-to-speech.	271
IMC_PlayMsg	Enables speed and volume control when playing voice messages by replacing the state table PlayVoiceMessage action.	271
IMC_POP3_Client	POP3 interface for connecting to POP3-compliance-mail servers	272

Table 15. Message Center custom servers (continued)

Message Center custom server name	Description	Page
IMC_RA_MsgClient	Processes RealAudio player requests to play voice messages. It passes these requests to IMC_RA_MsgServer. Note: IMC_RA_MsgClient is not a <i>true</i> custom server; it runs on the Web server.	273
IMC_RA_MsgServer	Lets subscribers listen to their voice messages over the Internet as streamed RealAudio.	273
IMC_RemoteNames	Plays audio names from remote systems.	274
IMC_RemoteSystems	Manages databases for remote systems.	274
IMC_Returnmail	Returns incoming e-mail messages rejected by the IMC_Getmail custom server.	275
IMC_RunST	Runs a state table from the command line (for use by system administrators).	275
IMC_Scheduler	Handles notification of new messages by outcalling to a pager or handset.	276
IMC_Sendmail	Creates and sends e-mail notes containing voice and fax attachments.	277
IMC_Splicer	Concatenates two greetings and saves them as a single greeting.	279
IMC_Stats	Gathers statistics from the command line.	279

Custom server descriptions

The rest of this appendix describes the custom servers in detail, in alphabetic order.

The custom servers are imported with Message Center, unless they have been deleted from the import list. After importing, the custom servers should have INSTALLED or AUTOEXEC IPL status in the Custom Server manager window in DirectTalk. If any of the custom servers are not installed, you can build and install them using the DirectTalk Custom Server windows.

If you change any main() arguments in Message Center custom server properties, you must save the changes, then stop and restart the custom server to pick up the new values.

IMC_AcuVoice_TTS

This custom server uses the AcuVoice Speech Synthesizer product. It provides functions to state tables for performing text-to-speech. Before you can use this custom server, you must install AcuVoice Speech Synthesizer AV2001 for AIX.

Commands

There are no commands.

Command line parameters

There are no command line parameters.

IPL status

Set the IPL status to AUTOEXEC if you are using the AcuVoice Speech Synthesizer. If you are using one of the other text-to-speech engines, set the IPL status to INSTALLED.

Control files

IMC_AcuVoice_TTS uses /var/dirTalk/MessageCenter/AcuVoice_TTS.ini to obtain the location of the AcuVoice Speech Synthesizer software installation. A typical file looks like this:

```
[Directories]
Soundbank = /home/dtuser/AcuVoice/sndbank
DictFiles = /home/dtuser/AcuVoice/dictfls
Temp = /tmp
```

The file consists of one section called **Directories**. Within this section there are three required fields. These are:

Soundbank

The location of the AcuVoice Speech Synthesizer sound bank files.

DictFiles

The location of the AcuVoice Speech Synthesizer dictionary files.

Temp The location of a directory that AcuVoice Speech Synthesizer can use for storing temporary files. This is typically /tmp.

Customization

You cannot customize this custom server.

IMC_Admin

IMC_Admin provides command line administration functions for day-to-day management of Message Center. Use these functions, or the MCIT interface (described in “Chapter 4. Message Center Interface Tool (MCIT)” on page 73), in preference to the DirectTalk Application Profiles window interface.

Commands

IMC_Admin supports the following commands:

addlist Adds a list of subscribers.

adduser

Adds a new subscriber.

changeuser

Changes any field in the subscriber's profile. This command allows you to update any field in the Message Center application profile. You can also use it in an AIX script.

dellist Deletes a list of subscribers.

deluser

Deletes a subscriber.

finduser

Searches for one or more subscribers.

listuser

Lists all subscribers.

showuser

Lists all the fields in a subscriber's profile.

These commands are shipped in the directory \$CUR_DIR/ca/IMC_Admin_dir/utills. As part of the installation process, we recommend that you move these commands to a directory accessible only by authorized administration users. This enables you to control which commands are made available to any particular ID. For example, you might authorize a help desk only to display a subscriber's profile, and change or reset the password.

For more information on how you use the commands, see "Chapter 3. Subscriber administration" on page 49.

Command line parameters**-e *external profile number***

It is sometimes necessary to delete profiles with outgoing messages to other profiles. The messages are re-sent from the external profile number, and do not have to be deleted entirely, preserving the integrity of references in the database. The default is 999999, and you should have no reason to change it.

IPL status

Set the IPL status to AUTOEXEC.

Control files

IMC_Admin gets startup information from /var/dirTalk/MessageCenter/IMCdefaults.file. This file is shared by other Message Center custom servers with their own default entries. The entries in this file specify global defaults used unless specifically overridden by an individual command. They need to be customized to your installation. The base entries for IMC_Admin are listed below:

Active_Greeting

The profile active greeting for a subscriber. This field is not the same as the mailbox_active_grt (see Table 7 on page 55) that specifies the active greeting to be played to callers. Message Center usually ignores this field.

Entry_Point

The entry point into the first state table.

Language

The active language number; for example, 1 for US English.

IMC_Admin

Mailboxes

The number of voice mailboxes activated for the subscriber. Leave this as the default of 1.

Password

The default password assigned when a subscriber is created.

State_Table

The name of the state table to be entered first when a profile is called.

Subscriber_Class

The subscriber class associated with the subscriber's definition.

The IMC_Admin entries might look like this:

```
/* Admin Server defaults...*/  
State_Table = IMC_STARTUP;  
Entry_Point = Start;  
Subscriber_Class = IMC_Basic;  
Mailboxes = 1;  
Active_Greeting = 1;  
Language = 1;  
Password = 00000000;
```

Each variable and its value must be separated by an equals sign (=) with one space on either side. Each entry must end with a semicolon.

The results of the add, delete, and list IMC_Admin commands are recorded in the file \$OAM_LOG_PATH/IMC_Admin.log. For lists, only the last entry and any errors are recorded. The file is checked for size, and a warning issued to the DirectTalk status window when the journal file is more than approximately 1MB.

Customization

The source code for this custom server is not supplied, but you can customize it by updating the IMCdefaults.file.

IMC_Attachment

IMC_Attachment lets state tables handle attachments to voice messages; for example fax and text (e-mail) attachments.

Commands

There are no commands.

Command line parameters

There are no command line parameters.

IPL status

Set the IPL status to AUTOEXEC.

Control files

There are no control files.

Customization

You cannot customize this custom server.

IMC_Broadcast

IMC_Broadcast broadcasts messages to large numbers of subscribers.

An authorized subscriber sends a message to the broadcast ID in the normal way. IMC_Broadcast sends the message to a list of subscribers. You can also send broadcast messages by partition (see page 76).

Messages sent to the broadcast ID by unauthorized senders are not broadcast, they are deleted.

Commands

There are no commands.

Command line parameters

-e *AdminID*

The administrator's profile ID from which the message is sent (mandatory). The default is profile ID 666666. Messages sent to the broadcast ID by subscribers other than this ID and partition administrator broadcast IDs (starting 666) are deleted.

-b *BroadcastID*

The profile ID to which the administrator sends messages to be broadcast (mandatory). The default is profile ID 777777.

-e *ExcludeFile*

The file containing the profile IDs to be excluded from a system-wide broadcast. The default is `/usr/lpp/dirTalk/db/current_dir/ca/IMC_Broadcast_dir/IMC_NoBroadcast.file`.

-f

Forces the sending of a message, even if the mailbox is announce-only or full.

-i *IncludeFile*

The file containing the profile IDs to be included in a system-wide broadcast. If no include file is specified, the broadcast is sent to all subscribers other than those in the exclude file.

-n

Notifications are sent to the recipients of the broadcast messages.

-s *SleepTime*

The interval, in seconds, between IMC_Broadcast checking to see if it needs to do anything. The default is 5 seconds.

-x *ExtProfileID*

The external caller profile ID. The default is 999999.

IPL status

Set the IPL status to AUTOEXEC.

Control files

IMC_Broadcast uses an exclude file and an include file as listed in the command line parameters. A sample exclude file containing all the system profile IDs to which broadcast messages would not normally be sent is shipped with Message Center. It is \$CUR_DIR/ca/IMC_Broadcast_dir/IMC_NoBroadcast.file. The exclude and include files must contain entries with one profile ID per line.

Customization

The source code for IMC_Broadcast is not shipped with Message Center. You can customize it only through command line options or updates to the include or exclude files.

IMC_Brooktrout

This custom server uses the Brooktrout TR114 FAX card. It provides functions to state tables to send and receive facsimiles. Both 1-call and 2-call fax transmission are supported, as well as fax reception. Faxes can be sent immediately, or queued for future transmission. Before you can use this custom server you must have already installed the following:

- The TR114 fax card and drivers
- The fax state tables
- The Brooktrout connection server
- Fax queueing utilities

All the above items, with the exception of the TR114 fax card, and drivers are shipped with the package.

Fax operation:

FAXes are currently received if a FAX CNG tone is detected during the playing of the subscriber's greeting. Once a CNG tone is detected, the state table IMC_RCV_FAX is invoked. As long as the subscriber has FAX support enabled and FAX reception is enabled on a system-wide basis, the state table IMC_FAX_IN is invoked. IMC_FAX_IN then invokes the state table IMC_BT_RECV_FAX.

When a FAX has to be sent, the state table IMC_SEND_FAX is invoked. This state table will determine the destination for the FAX and invoke IMC_FAX_OUT. IMC_FAX_OUT will retrieve the TIFF attachment and send the FAX by invoking the state table IMC_BT_SEND_FAX.

Commands

In order for a subscriber to have FAX support enabled, their profile must be configured appropriately. The profile field **fax_server** must be set to **TR114**. This variable is accessible from within state tables via the system variables SV404 and SV474. The Message Center commands **showuser** and **changeuser** may also be used to display and set the variable respectively, for example

```
showuser -e xxxx -u fax_server
changeuser -e xxxx -u fax_server -v 'TR114'
```

The following new command-line utilities are provided with the IMC_Brooktrout package to manipulate the Brooktrout fax queue:

- **btq_list** - Display the queue contents. This command will display the contents of the queue in a formatted fashion.
- **btq_delete** - Delete an entry from the queue. This command will be used for removing entries from the FAX queue.

Command line parameters

With no parameters, **btq_list** displays the contents of the queue like this

ID	Q	Date	Q Time	Profile	Destination	Tries	Filename
34	2000/05/24	13:01:55	1234	3054361571	1	/tmp/fax321.tif	
35	2000/05/24	13:21:18	2703	3054361571	1	/tmp/fax980.tif	

-c The **-c** command line option that displays the queue information without a header and with colon-separated fields. This can be useful if some other application will be formatting and presenting the data, for example MCIT. Here is what the output looks like when **btq_list -c** is invoked:

```
34:20000524:130155:1234:3054361571:1:/tmp/fax321.tif
35:20000524:132118:2703:3054361571:1:/tmp/fax980.tif
```

-i For **btq_delete** the FAX to be deleted will be identified by its ID, for example, **btq_delete -i 35**. This command would delete the FAX entry with ID 35.

IPL status

Set the IPL status to INSTALLED

Control files

This custom server uses the file IMC_MessageCenter.ini for its configuration settings.

Here is the entire section of the file IMC_MessageCenter.ini that deals with the Brooktrout FAX card support:

```
[XXX_Brooktrout]
MaxProcessesToSpawn = 5
LoggingLevel = 1
FaxReceptionDirectory = /var/dirTalk/MessageCenter/IncomingFaxes
FaxQueueLocation = /var/dirTalk/MessageCenter
MaxQueueFaxChannels = 1
MaxTransmissionAttempts = 5
WaitTimeOnEmptyQ = 30 # in seconds
WaitTimeOnNonEmptyQ = 0 # in seconds
```

Parameter descriptions

MaxProcessesToSpawn

This is the maximum number of child processes that the custom server should spawn in order to handle state table requests. This may need to be increased on a very busy system with a lot of FAX activity.

LoggingLevel

This is the logging level that the custom server should generate. The maximum

IMC_Brooktrout

is five and the normal operating mode is at level one. The custom server is only required to check this setting at startup and thus if this setting is changed, the custom server must be restarted in order for the change to take effect.

FaxReceptionDirectory

This is directory into which FAXes would be placed when they are received by IMC_Brooktrout and a file name hasn't been specified by the user. This location should be one that is not shared in an SSI environment to ensure that incoming FAXes do not interfere with each other.

FaxQueueLocation

This is the directory where the FAX queue data file will be kept. This location should be one that is not shared in an SSI environment to ensure that each client has its own FAX queue.

MaxQueueFaxChannels

This is the maximum number of FAX channels that will be used for outbound queued FAXes. This should be increased on a busy system with a lot of outbound FAXing, but the trade off is that it would reduce the number of channels available for inbound and one-call fax reception. If there are no outbound FAXes queued, then these channels will be available for inbound and one-call fax reception.

MaxTransmissionAttempts

This is the maximum number of times a retransmission of a FAX would be attempted. If a FAX still cannot be transmitted after this many attempts, it will be aborted and an appropriate error will be logged.

WaitTimeOnEmptyQ

When the FAX queue is empty, the queuing process will wait this number of seconds before checking the queue again. This is to prevent the queuing process from entering a tight loop and using up a lot of system resources. This should be set as large as possible on the system. On a non-busy system, this would determine how long someone would have to wait for a FAX to be sent.

WaitTimeOnNonEmptyQ

This is the number of seconds the FAX queuing process would wait after processing a FAX entry and before starting to process the next entry. This would typically be zero.

Customization

You cannot customize this server.

IMC_ByName

IMC_ByName supports the Message Center *dial-by-name* function.

Commands

There are no commands.

Command line parameters

There are no command line parameters.

IPL status

Set the IPL status to AUTOEXEC.

Control files

There are no control files.

Customization

You cannot customize this custom server.

IMC_CA_Monitor

IMC_CA_Monitor monitors the list of custom servers that should be running on the system and restarts them if necessary. When the custom server first starts, it sleeps for an initial period before trying any restarts. This ensures that it does not interfere with the normal startup processes when DirectTalk first comes up. It then restarts any custom servers that should be running but that are not. It then sleeps for a set period before regularly checking the custom servers and restarting any that are not running.

Commands

There are no commands.

Command line parameters

- a** Sets the custom servers to AUTOEXEC (if they are not already).
- f** The name of the control file to use. The default is `$CUR_DIR/ca/IMC_CA_Monitor_dir/monitor.file`. For more information, see "Control files".
- i** Initial sleep time (in seconds) on startup. The default is 1000 seconds.
- r** Regular sleep time (in seconds) before checking custom servers. The default is 600 seconds.

IPL status

Set the IPL status to AUTOEXEC.

Control files

The control file `monitor.file` contains a list of the custom servers that IMC_CA_Monitor will keep running. You can add or delete items even if they are not Message Center custom servers. For example, if you are using external messaging or World Wide Web access to Message Center, add the relevant custom servers to `$CUR_DIR/ca/IMC_CA_Monitor_dir/monitor.file`.

If there is a number in the range 21-40 after the custom server name, IMC_CA_Monitor also tries to set the priority of the custom server to this value. This enables you to reduce the priority of custom servers that use too much system resource. By default all custom servers start with a priority of 20.

Customization

You cannot customize this custom server.

IMC_Change_Lang

IMC_Change_Lang

IMC_Change_Lang changes the language in an application profile. It is called by the IMC_LANG state table when a subscriber requests a valid language change.

Commands

There are no commands.

Command line parameters

There are no command line parameters.

IPL status

If you want to be able to change languages, set the IPL status to AUTOEXEC. (See also the state table "IMC_Change_Lang".)

Control files

There are no control files.

Customization

You cannot customize this custom server.

IMC_CMCServer

IMC_CMCServer manages all transactions for a special type of integrated messaging with Lotus Notes. For more information on this special type of Lotus Notes integrated messaging, contact your Lotus Notes supplier.

Commands

There are no commands.

Command line parameters

-P *pitch*

A value from 1 to 9 that alters the pitch of text-to-speech. The default is 5.

-S *speed*

A value from 1 to 9 that alters the speed of text-to-speech. The default is 5.

-V *volume*

A value from 1 to 9 that alters the volume of text-to-speech. The default is 5.

IPL status

Set the IPL status to INSTALLED.

Control files

There are no control files.

Customization

You cannot customize this custom server.

IMC_CS_Control

IMC_CS_Control provides command line utilities for working with custom servers instead of using the DirectTalk GUI.

Commands

IMC_CS_Control supports the following commands:

csdeinstall

Deinstall a custom server.

csdelete

Delete a custom server. The custom server must first have been deinstalled using either the **csdeinstall** command or the DirectTalk GUI.

csgetinfo

Get detailed information on a custom server. The typical output looks like this:

```
PID:                                75492
Run Status:                         WAITING
IPL Status:                         AUTOEXEC
Last Subroutine:                     CA_Receive_DT_Msg
Seconds Since Last Used:             907425772
Max Pool Buffers:                    2500
Num Pool Buffers:                    0

Num Channel Processes Linked In:     0
```

csinstall

Install a custom server.

cssetipl

Toggle the IPL status of a custom server. If the status is INSTALLED, change it to AUTOEXEC. If the status is AUTOEXEC, change it to INSTALLED.

csstart Start a custom server.

csstop Stop a custom server.

Command line parameters

All these commands take one argument which is the name of the custom server. For example:

```
csgetinfo IMC_IMAP4_Client
```

IPL status

Set the IPL status to AUTOEXEC.

Control files

There are no control files.

Customization

You cannot customize this custom server.

IMC_DeleteMsg

Use IMC_DeleteMsg to delete new and saved messages from mailboxes after a specified period of time. If you don't want messages deleted in this way, don't use IMC_DeleteMsg; it's shipped as INSTALLED, so it won't start up of its own accord. Furthermore, if you don't change the subscriber parameters for deletion time, and start up IMC_DeleteMsg, it won't delete any messages unless you pass parameters to it.

If you decide to delete messages automatically at specified intervals, to simplify the workload of the administrator, make sure that the subscribers are aware of what happens:

- *New* messages to be deleted are deleted according to the number of days after which they were originally recorded. You can set the number of days, by subscriber, using the `days_del_new_msgs` field (see Table 7 on page 55).
- *Saved* messages to be deleted are deleted according to the number of days after which they were originally listened to or saved. You can set the number of days, by subscriber, using the `days_del_saved_msgs` field (see Table 7 on page 55).

If you set either field to 0 (zero) messages will never be deleted unless the field is overridden with parameters passed to IMC_DeleteMsg.

IMC_DeleteMsg checks *all* records in the voice messaging database. This can affect the response times for other database accesses at the same time, especially for very large voice messaging databases. We therefore recommend that you run IMC_DeleteMsg **only** when few or no calls are being processed, to minimize the impact on subscribers and callers.

Single system image considerations

We advise against running IMC_DeleteMsg on multiple systems in an SSI cluster at the same time. They might duplicate each others' tasks, causing errors to be logged if they delete messages which others intended to delete. Run IMC_DeleteMsg on a single system according to an AIX cron task. (You could also, if required, set different systems to run IMC_DeleteMsg on different days.)

Commands

You can use IMC_DeleteMsg itself as a command, invoking it periodically using the AIX cron daemon. To do this, you must precede the command in dtuser's cron table with `./usr/lpp/dirTalk/tools/vae.setenv;`. This ensures that the custom server has the correct environment in which to run. Alternatively, you can set it to run at intervals according to parameters (main args) passed to it from the custom server properties windows.

To find out how to configure the subscriber fields `days_del_new_msgs` and `days_del_saved_msgs`, see "Changing details of a subscriber (changeuser)" on page 54.

Command line parameters

-l *logging level*

The amount of information logged, if any:

- 1** Log the subscriber number, the type of message (new or saved), and the message ID deleted. This is the default.
- 2** Log the information in level 1. Also log the sender of the message, the date and time at which the message was saved or recorded, and the date and time at which IMC_DeleteMsg is running.
- 0** Disable logging.

-f *logging path and file name*

Use this to override the default path and filename for logging, which is \$CUR_DIR/oamlog/IMC_DeleteMsg.log.

-n *number of days*

Use this to override any days_del_new_msgs fields set to 0. This lets you override on a subscriber-by-subscriber basis.

-N *number of days*

Use this to override **all** days_del_new_msgs fields. Using this parameter slightly reduces the impact on database performance.

-s *number of days*

Use this to override any days_del_saved_msgs fields set to 0. This lets you override on a subscriber-by-subscriber basis.

-S *number of days*

Use this to override **all** days_del_saved_msgs fields. Using this parameter slightly reduces the impact on database performance.

-x When deleting new messages, treat saved messages in the same way: if a saved message meets the new message deletion criteria, but doesn't meet the saved message deletion criteria, delete it anyway.

-y Treat messages that have been listened to in the same way as saved messages: if a new message has been listened to but not saved, delete it if it hits the saved message deletion criteria.

-u *microseconds between deletes*

To reduce the problem of IMC_DeleteMsg consuming database resource, specify a time in microseconds (1 second = 1,000,000 microseconds) to wait between deleting messages.

Note: There will still be an initial impact on the database while IMC_DeleteMsg identifies the messages to be deleted.

-T time If you omit this parameter, IMC_DeleteMsg runs immediately, deleting all messages meeting the criteria defined in the parameters when IMC_DeleteMsg started.

When you use the -T parameter, specifying a 24-hour clock time in the format HH:MM, IMC_DeleteMsg runs every time the clock reaches the time specified,

IMC_DeleteMsg

until you shut IMC_DeleteMsg down. For example, `-T 15:00` runs IMC_DeleteMsg at 3 o'clock every afternoon; `-T 03:00` runs IMC_DeleteMsg at 3 o'clock every morning.

-D *day of week*

Use -D with the -T parameter to restrict the database check to a particular time on a particular day. The *day of week* variable is a number from 1 to 7, where 1 is Sunday and 7 is Saturday.

So if you want to run IMC_DeleteMsg every Sunday morning at 3 o'clock, use `-T 03:00 -D 1`.

If you need more flexibility for your schedules than you can get with -T and -D, use the AIX cron task to start IMC_DeleteMsg intermittently.

- z** Treat saved messages with no *listened to* or *saved* date as if their sent date was one of these. (This is mainly to tidy up messages saved previously on earlier versions of Message Center, when it was called DirectTalkMail.)

IPL status

If you use IMC_DeleteMsg with the -T parameter, set the status to AUTOEXEC. Otherwise, leave it set to INSTALLED; you can still run IMC_DeleteMsg at scheduled intervals using the AIX cron task.

Control files

There are no control files.

Customization

You cannot customize this custom server.

IMC_DeleteVoiceMessage

IMC_DeleteVoiceMessage lets state tables delete voice messages; after deletion, they can later be undeleted. It also allows the state tables to purge messages that have been deleted; once a message is purged, it cannot be undeleted.

In order to provide for the message undeletion feature, Message Center uses mailbox 10 to temporarily store the voice message when it is deleted. When a subscriber chooses to delete a voice message, it is moved to mailbox 10. If they choose to undelete the message, then it is moved back to mailbox 1. Once the subscriber ends the current session, all messages remaining in mailbox 10 are purged.

Commands

There are no commands.

Command line parameters

-n *number of processes to spawn*

The number of extra custom server processes to spawn on startup. The default is 10; adjust it to suit the number of voice channels on your system, and how busy that system is.

IPL status

Set the IPL status to AUTOEXEC.

Control files

There are no control files.

Customization

You cannot customize this custom server.

IMC_Directory

Use IMC_Directory to maintain the personal directory for each Business - local & remote and Remote e-mail only subscriber.

Each Business - local & remote and Remote e-mail only subscriber can use the Web interface to maintain a personal directory with an unlimited number of entries. They use their personal directory to filter e-mail messages retrieved from remote IMAP4 or POP3-compliant e-mail servers.

Commands

There are no commands.

Command line parameters

There are no command line parameters.

IPL status

Set the IPL status to AUTOEXEC.

Control files

There are no control files.

Customization

You cannot customize this custom server.

IMC_Dlist

IMC_Dlist creates a distribution list from a standard text file. After processing, the input file is copied to an archive directory.

IMC_Dlist allows you to create and maintain distribution lists automatically, based on data held outside Message Center. For example, if your telephone directory lists the department of each subscriber, you can generate a distribution list for each department.

The name of the input file must be numeric and in the format `profile_id.dlist_id`, where `profile_id` is the ID for which the list is to be created and `dlist_id` is the ID of the distribution list to be created. For example, from a file name of 6926.49, the distribution list ID 49 would be created for profile ID 6926.

The input file must contain definitions of the destinations, which must be numeric. Each definition is an individual destination to be added to the distribution list `dlist_id`.

IMC_Dlist

There must be only one destination per line in the file. For example, a distribution list with four destinations looks like this:

```
2612
2719
8261279
8261553
```

Note: There is an absolute limit of 90 members on the number of entries in a DirectTalk distribution list.

Single system image considerations

Run IMC_Dlist only on a single system at a time, to prevent duplication of tasks. Invoke it periodically from an AIX cron task. IMC_Dlist is ideally suited to be run only on a single system image server machine.

Commands

There are no commands.

Command line parameters

-a *archive directory name*

The name of the directory to which the archived input files are written. The default is /usr/lpp/dirTalk/db/current_dir/ca/IMC_Dlist_dir/archive_dir.

-i *input directory name*

The name of the directory containing the input files. The default is /usr/lpp/dirTalk/db/current_dir/ca/IMC_Dlist_dir/input_dir. Check that there is nothing other than input files in this directory.

-f Overwrite existing distribution lists.

-h Help for command line options.

-rreject *directory name*

The name of the directory to which the rejected input files are written. The default is /usr/lpp/dirTalk/db/current_dir/ca/IMC_Dlist_dir/reject_dir.

-s time The interval, in minutes, between polls of the input directory for new files. If you omit this parameter, IMC_Dlist shuts down after processing all files found in the input directory. You can invoke IMC_Dlist periodically from AIX cron tasks.

IPL status

Set the IPL status to AUTOEXEC if you are using this function; otherwise set it to INSTALLED.

Control files

There are no control files.

Customization

You cannot customize this custom server.

IMC_DlistNames

IMC_DlistNames associates recorded names with distribution lists.

Commands

There are no commands.

Command line parameters

There are no command line parameters.

IPL status

Set the IPL status to AUTOEXEC.

Control files

There are no control files.

Customization

You cannot customize this custom server.

IMC_GetMsgBox

IMC_GetMsgBox selects a mailbox randomly, to spread the load, from the outgoing mailboxes defined for messages being sent to external destinations using SMTP/MIME e-mail. This allows multiple outgoing messages to be processed in parallel.

Commands

There are no commands.

Command line parameters

-c *filename*

The name of the control file containing the profile IDs to be used for outgoing messages. The default is
/usr/lpp/dirTalk/db/current_dir/ca/IMC_Sendmail_dir/control.file.

-e *profile_id*

The outgoing profile ID to be used when the control file is missing. The default value is 555555 and you should not change this.

-h Help for command line options.

-n The number of copies of IMC_GetMsgBox spawned to handle multiple simultaneous requests. The default is 10.

IPL status

Set the IPL status to AUTOEXEC if you are using external messaging; otherwise set it to INSTALLED.

Control files

The default control file (\$CUR_DIR/ca/IMC_Sendmail_dir/control.file) contains the profile IDs to be used to temporarily hold messages bound for external destinations. Each profile ID has ten active mailboxes. The default control file contains one outgoing profile

IMC_GetEmsgBox

ID, 555555. Do not remove this profile ID from the file. If you need more outgoing mailboxes, add more profile IDs to this file, one profile per line. For example:

```
555555
555551
555552
```

Using this control file, Message Center will use up to 30 outgoing mailboxes simultaneously.

Customization

You cannot customize this custom server.

IMC_Getmail

IMC_Getmail processes incoming SMTP/MIME e-mail, which might contain voice or fax attachments in addition to the e-mail text. This mail is converted into voice messages and put into a subscriber's mailbox.

Single system image considerations

On a single system image cluster, we advise against using the single system image server as the receiver of SMTP/MIME mail items if the server has no telephony. This is because the reception of a mail item on a system triggers the notification systems on that system. If the server has no telephony, it cannot make outcalling notifications to the subscriber's notification schedules.

For details of how to configure the single system image server to forward all mail to its clients, see "Implementing VPIM or SMTP/MIME external messaging" on page 20.

Commands

There are no commands.

Command line parameters

- f** Allow forwarding of incoming e-mail to an external e-mail address.
- h** Help for command line options.
- s** Suppress notification of new messages. The default is not to suppress notification.

-i *input directory name*

The name of the directory where incoming e-mail files are to be saved. The default is /var/dirTalk/MessageCenter/mail_in.

-a *archive directory name*

The name of the directory where processed input files are archived. The default is /var/dirTalk/MessageCenter/mail_archived.

-r *reject directory name*

The name of the directory where input files that could not be successfully processed are saved. These files are returned to the sender, then moved to the archive directory. The default is /var/dirTalk/MessageCenter/mail_rejected.

- m *max receives*
The maximum number of recipients of an incoming note. The default is 1000.
- e *external id*
The external caller profile ID from which incoming messages from unknown external callers appear to be sent. The default is 999999.
- j *rejection id*
The profile ID from which rejected mail is returned to the sender. The default is 999999.
- l *loopback id*
The profile ID from which mail being looped back to the sending system is sent. The default is 555555.
- g *fax profile*
Lets you specify something other than 333333 as the fax profile.
- P *pitch*
A value from 1 to 9 that alters the pitch of text-to-speech. The default is 5.
- S *speed*
A value from 1 to 9 that alters the speed of text-to-speech. The default is 5.
- V *volume*
A value from 1 to 9 that alters the volume of text-to-speech. The default is 5.
- w *time* The interval, in seconds, between polls of mail_in directory for new files. The default is 30 seconds.
- x Suppress archiving of incoming mail.

IPL status

Set the IPL status to AUTOEXEC if you are using external messaging; otherwise set it to INSTALLED.

Control files

There are no control files.

Customization

You cannot customize this custom server.

IMC_GetProf

Use IMC_GetProf with special housekeeping routines. It is called by a state table SendData action, returning the next application profile in the system on each ReceiveData action until the **No More Data** result is returned. For example, you might want to refresh all the message waiting lights, or check which subscribers have not recorded audio names.

Commands

There are no commands.

IMC_GetProf

Command line parameters

There are no command line parameters

IPL status

Set the IPL status to AUTOEXEC.

Control files

There are no control files.

Customization

You cannot customize this custom server.

IMC_GetPwd

IMC_GetPwd looks up and calculates the expiry date of a subscriber's password.

This is a binary custom server that can be called only from within Message Center binary state tables. It will have an agreed private key with Message Center. The subscriber must have already signed on to Message Center with a valid password before this custom server can be invoked.

Commands

There are no commands.

Command line parameters

- h** Help for command line options.
- n** The number of copies of IMC_GetPwd spawned to handle multiple simultaneous requests. The default is 5.

IPL status

Set the IPL status to AUTOEXEC.

Control files

There are no control files.

Customization

You cannot customize this custom server.

| IMC_GlobalVariables

| State tables use this custom server to retrieve settings from the Message Center
| configuration file, \$CUR_DIR/ca/ini/IMC_MessageCenter.ini.

| Commands

| There are no commands.

| Command line parameters

| There are no command line parameters.

IPL status

Set the IPL status to AUTOEXEC.

Control files

The custom servers accesses settings in the file
\$CUR_DIR/ca/ini/IMC_MessageCenter.ini.

Customization

You cannot customize this custom server.

IMC_Greetings

For Business - local and Business - local & remote subscribers, state tables use IMC_Greetings to determine which caller options are available for the particular greeting that a subscriber has selected.

Commands

There are no commands.

Command line parameters

There are no command line parameters.

IPL status

Set the IPL status to AUTOEXEC.

Control files

IMC_Greetings gets greeting configuration information from the file
/var/dirTalk/MessageCenter/Greetings.ini. Some typical entries in this file might be as follows:

```
#
# Available and working at the office
#
[1]
pager = yes
followme = no
backup = yes
transfer = yes

#
# Available, but working away from the office
#

[2]
pager = yes
followme = yes
backup = yes
transfer = yes
```

The file consists of *sections* for each greeting. The section header is the greeting ID. Under each section, there are four *fields* that can be set to either yes or no. The field names available are:

IMC_Greetings

pager Whether the caller is allowed to page the subscriber.

followme

Whether the caller is allowed to use ReachMe to try to reach the subscriber.

backup

Whether the caller is allowed to transfer to the subscriber's backup or deputy.

transfer

Whether the caller is allowed to transfer to another number.

If a field is set to yes, and a subscriber has that particular greeting selected, callers have the corresponding option available when they press **0** while playing the greeting. If a field is set to no, that option is not available.

In the example above, for greeting ID 1, callers can page the subscriber, transfer to a backup, and transfer to another number, but they cannot use ReachMe. For greeting ID 2, all options are available to callers.

Customization

You cannot customize this custom server, but you can customize the greeting options by editing the Greetings.ini file.

IMC_IMAP4_Client

State tables use IMC_IMAP4_Client to access e-mail messages that reside on remote IMAP4-compliant e-mail servers. This applies to Business - local & remote and Remote e-mail only subscribers only.

Commands

There are no commands.

Command line parameters

-l *logging level*

Controls the output logging level of IMC_IMAP4_Client. This can be a number from 1 to 5, with 1 being minimal logging and 5 being the most extensive. If you omit this argument, IMC_IMAP4_Client defaults to level 1 logging. You can find the log file IMC_IMAP4_Client.log in \$CUR_DIR/oamlog.

IPL status

Set the IPL status to AUTOEXEC.

Control files

There are no control files.

Customization

You cannot customize this custom server.

IMC_IMAP4_Server

Use IMC_IMAP4_Server to allow IMAP4-compliant e-mail clients to connect to Message Center using the IMAP4 protocol. Such clients have full access to voice and fax messages that reside within Message Center.

Commands

There are no commands.

Command line parameters

-w *web_server_name*

The fully-qualified domain name of the Web server being used. If you are using the same RS/6000 both for Message Center and as your Web server, or you are using no Web server, omit this parameter, or set it to **-w hostname**, where *hostname* is the name of the RS/6000. By default, Message Center is supplied with this parameter omitted.

IPL status

Set the IPL status to INSTALLED.

Control files

There are no control files.

Customization

You cannot customize this custom server.

IMC_LDAP_Client

State tables use this custom server for accessing *LDAP* (Lightweight Directory Access Protocol) servers. This is used by the *telephony portal* feature and by **Business local & remote** and **Remote e-mail only** subscribers when they are filtering their e-mail, replying to messages, forwarding messages, and composing messages.

Commands

IMC_LDAP_Client supports the following commands:

get_dn This command takes the full name of a person and returns the **dn** (distinguished name) for all possible matches.

get_user

Displays the telephony portal settings for a subscriber based on the distinguished name.

pwdutil

This command is used for setting the passwords for LDAP servers in ini files. It will encrypt the password and save it in the ini file.

set_user

Changes fields in the system-wide LDAP server for telephony portal subscribers. The subscriber's login information and e-mail server information can be changed.

IMC_LDAP_Client

These commands are shipped in the directory
\$CUR_DIR/ca/IMC_LDAP_Client_dir/utls.

Command line parameters

There are no command line parameters.

IPL status

Set the IPL status to AUTOEXEC.

Control files

IMC_LDAP_Client uses the file \$CUR_DIR/ca/ini/IMC_MessageCenter.ini for its configuration settings. Here are the relevant sections from this file with the default settings:

```
[GlobalVariables]
TelephonyPortalExt = 1111

[LDAP_Server]
SystemDefaultServer = ldapserver.ibm.com

[TelephonyPortal]
Active = no
```

TelephonyPortalExt

This is the extension that *telephony portal* subscribers would dial in order to retrieve their messages. This is equivalent to the **VMailExtension** that is used by regular Message Center subscribers.

SystemDefaultServer

This is the fully qualified domain name of the system-wide LDAP server. If LDAP isn't being used at your location, this field should be blank.

Active

This field is used to enable or disable the telephony portal feature. Valid values are **no** or **yes**.

In addition to the settings in the Message Center configuration file, an ini file must exist for each LDAP server that can be accessed, including the system-wide LDAP server. These ini files are kept in the directory \$CUR_DIR/ca/ini. They are named based on the fully qualified domain name of the LDAP server with .ini appended. For example, if the LDAP server name is ldapserver.ibm.com, the ini file name would be ldapserver.ibm.com.ini. This file contains configuration information specific to the LDAP server. Here is the sample ini file that ships with Message Center:

```
[Server]
Base =
UseSSL = no

[Fields]
NameField = cn
DistinguishedNameField = dn
DigitNameField = digitname
EmployeeNumberField = employeenumber
DepartmentField = department
```

```

|         PhoneNumberField = telephonenumber
|         TielineField = tieline
|         FAXNumberField = facsimileTelephoneNumber
|         TransferNumberField = callforwardingnumber
|         EmailAddressField = email
|         LoginField = loginid
|         PinField = password
|         EmailServerTypeField = emailservertypefield
|         EmailServerField = emailservername
|         EmailAccountIdField = emailaccountid
|         EmailPasswordField = emailaccountpassword
|         EmailAddressField = mail

```

Customization

You cannot customize this custom server.

IMC_LogError

IMC_LogError logs an alarm in the DirectTalk error log if Message Center has a technical problem and cannot complete a caller or subscriber function.

Commands

There are no commands.

Command line parameters

There are no command line parameters.

IPL status

Set the IPL status to AUTOEXEC.

Control files

There are no control files.

Customization

You cannot customize this custom server.

IMC_MAO

IMC_MAO schedules and manages the multiple AMIS output lines of the AMIS-Analog external messaging function provided with Message Center.

Commands

There are no commands.

Command line parameters

There are no command line parameters.

IPL status

If you are using external messaging functions, set the IPL status to AUTOEXEC.

Control files

There are no control files.

Customization

You cannot customize this custom server.

I IMC_MessageCenterAPI

This custom server is used by the Java Beans API. The Java Beans API is in turn used by the WWW interface. This custom server provides the backend functionality required for the WWW interface.

Commands

There are no commands.

Command line parameters

There are no command line parameters.

IPL status

Set the IPL status to AUTOEXEC.

Control files

IMC_MessageCenterAPI listens on a particular TCP/IP socket. This socket can be set in the file \$CUR_DIR/ca/ini/IMC_MessageCenter.ini. The logging level for the custom server can also be changed. Here is the relevant section for the file with the default values:

```
[XXX_MessageCenterAPI]
LogLevel = 1
TCP_port = 25121
```

LoggingLevel

The normal logging level is 1. This value can be changed up to a maximum of 5. A login level of 5 would produce a large amount of logging information and is only typically used for debugging purposes.

TCP_port

This is the TCP/IP port that the custom server will listen on for requests from the Java Beans. If this port number is changed, then the Java Beans would have to be modified to also use the new port number.

Customization

You cannot customize this custom server.

IMC_MoveProfile

IMC_MoveProfile moves one or more subscribers to a new extension or system. You can start it from the DirectTalk Welcome Window, by clicking **Operations → Custom Server Manager**.

Commands

IMC_MoveProfile supports the following command:

moveprofile

This line command moves one or more subscribers to a new extension or

system. It can move the greeting header and greetings, the audio name, and all new, saved, and outgoing messages. See “Moving an application profile to a new system (moveprofile)” on page 65.

Note: If you want to move all the profiles in a system onto another system, we recommend that you use the commands **vm_backup** (see “Voice message and mailbox backup utility” on page 297) and **vm_restore** (see “Voice message and mailbox restore utility” on page 298).

This command is shipped in the \$CUR_DIR/ca/IMC_MoveProfile_dir/utlis directory.

Command line parameters

- h** The help panel.
- p** *server port*
The default is 25113. This must match the server port used with the moveprofile command (see page 65).
- t** Enable tracing.

IPL status

Set the IPL status to INSTALLED. You will need to start this custom server when you use the **moveprofile** command.

Control files

There are no control files.

Customization

You cannot customize this custom server.

IMC_MsgClient

Message Center Release 6 Version 4 provides a new web interface. IMC_MsgClient, described below, is needed to support the old web interface which is still provided in release 6.4.

IMC_MsgClient is the client process to IMC_MsgServer. It is not a custom server and it does not run on DirectTalk. It runs on the World Wide Web server system from which the subscriber is accessing Message Center. IMC_MsgClient runs only on an AIX Web server. IMC_MsgClient receives requests from the subscriber’s local Web browser and converts them into requests to IMC_MsgServer over TCP/IP. When the information is received from IMC_MsgServer, IMC_MsgClient converts it into HTML format and passes it to the Web browser.

Before using IMC_MsgClient, copy it to the Web server machine. This executable is in the \$CUR_DIR/ca/IMC_MsgServer_dir/IMC_MsgClient_dir directory.

Submit a World Wide Web form containing the subscriber’s profile ID and password to initiate IMC_MsgClient. The source for such a form is

IMC_MsgClient

\$CUR_DIR/ca/IMC_MsgServer_dir/html_dir/index.html. See “Setting up World Wide Web access to Message Center” on page 24 and “World Wide Web access to Message Center” on page 47 for information on getting your Message Center system ready for using the World Wide Web.

Commands

There are no commands.

Command line parameters

IMC_MsgClient has several command line arguments passed to it, generated by IMC_MsgClient itself when constructing hyperlinks on the Web pages it writes. However, these are for internal use only, and should never be invoked manually.

-d *destination*

The Internet address of the machine on which IMC_MsgServer is running.

-i This is a request for information on all the mailbox details, not for an individual message.

-l *file name*

The file in which IMC_MsgClient logs access requests. The default is IMC_MsgClient.log in the directory from which IMC_MsgClient is run.

-p *port number*

The port number over which IMC_MsgClient communicates with IMC_MsgServer. The default is 26637.

Note:

This port number must match the port number set in IMC_MsgServer (see page 266).

Control files

There are no control files.

Customization

The source code for this custom server is shipped with Message Center so that you can customize it.

IMC_MsgServer

Message Center Release 6 Version 4 provides a new web interface. IMC_MsgServer, described below, is needed to support the old web interface which is still provided in release 6.4.

IMC_MsgServer provides subscribers access to their Message Center mailboxes and messages over the Internet. Using any standard Web browser software they can list their voice messages and play them on their PC or workstation.

Single system image considerations

If you are using a single system image server without telephony connections, we advise against configuring the Web pages to use the server as the system from which to retrieve messages. This is because the server cannot initiate

calls (if users select to send messages **To your telephone...** instead of having them downloaded to their browser as WAV or AU files).

If you remove this option from the Web page, as described in “World Wide Web access to Message Center” on page 47, you can run IMC_MsgServer on a server without telephony.

For details on how to configure the Web pages to access the IMC_MsgServer processes on clients instead of the server, see “Setting up World Wide Web access to Message Center” on page 24.

Commands

There are no commands associated with IMC_MsgServer, but there is a client process. See “IMC_MsgClient” on page 265.

Command line parameters

IMC_MsgClient has several command line arguments passed to it, generated by IMC_MsgClient itself when constructing hyperlinks on the Web pages it writes. However, these are for internal use only, and should never be invoked manually.

-e days Number of days before a newly-changed password expires. The default is 30 days.

-h Help with command line options.

-m profilepwlimit

The maximum number of invalid password entries that can be entered before Message Center disables the mailbox.

-p port number

The port number over which IMC_MsgServer communicates with IMC_MsgServer. The default is 26637.

Note:

This port number must match the port number set in IMC_MsgClient (see page 265).

IPL status

If you are using Internet access to Message Center, set the IPL status to AUTOEXEC, and add it to monitor.file (see “IMC_CA_Monitor” on page 247).

Control files

There are no control files.

Customization

The source code for this custom server is shipped with Message Center so that you can customize it.

IMC_Notify

IMC_Notify

IMC_Notify receives notification of new messages from the IMC_NOTIFY state table. In the example supplied, the IMC_Notify custom server sends an e-mail notification when a new message arrives.

Note: There is a dependency between IMC_Notify and IMC_Scheduler. If you are using IMC_Scheduler for outdialing notification, IMC_Notify needs to attach to IMC_Scheduler's message queue for notifications. When IMC_Scheduler starts up, it always stops and restarts IMC_Notify to ensure that IMC_Notify is attached to the correct message queue.

Commands

There are no commands.

Command line parameters

There are no command line parameters.

IPL status

Set the IPL status to AUTOEXEC, unless you are using IMC_Scheduler, when you can set it to INSTALLED, because IMC_Scheduler restarts it.

Control files

IMC_Notify gets startup information from /var/dirTalk/MessageCenter/IMCdefaults.file. This file is shared by other Message Center custom servers which have their own default entries. The entries in this file specify global defaults for IMC_Notify that you might need to customize for your installation. The entries for IMC_Notify are listed below:

Alt_Notify_ID

The alternative destination ID of the notification messages. This can be any valid Internet address.

Note: This, and the next two entries, are used only if DEBUG is defined in the compiled IMC_Notify custom server code, in which case a notification message is sent to both **Notify_ID** and **Alt_Notify_ID** for the two debug extensions only.

Debug_Ext1 Debug_Ext2

If DEBUG is defined in the compiled IMC_Notify custom server code, additional notification messages relating to activities for these two extension numbers are sent to the ID defined in the Alt_Notify_ID entry.

Notify_ID

The destination ID of the notification messages. This can be any valid Internet address.

Note: This, and the next two entries, are used only if SEND_TO_SERVER is defined in the compiled IMC_Notify custom server code. If the default SEND_TO_ADDRESS is used, the e-mail notifications are sent to the **email_address** of a subscriber.

Mail_Password

Used by the receiving ID to validate the authenticity of the messages.

Mail_Termchar

The character used to identify the end of the notification message data.

The IMC_Notify entries might look like this:

```
/* Notify Server defaults...*/
Notify_ID = dtmail@location.somewhere.com;
Alt_Notify_ID = monitor@location.somewhere.com;
Debug_Ext1 = 3698;
Mail_Password = poppy;
Mail_Termchar = #;
Debug_Ext2 = 5515;
```

Each variable and its value must be separated by an equals sign (=) with one space on either side. Each entry must end with a semicolon.

Customization

The source code for IMC_Notify is shipped with Message Center so that you can customize it.

Note: Do not change the DTMAIL_Outcall function; this is not a customizable function of IMC_Notify.

Before you make any changes, take backup copies of the originals.

If you do not need IMC_Notify, remove the calls to the DTMAIL_SendNotify function from the IMC_NOTIFY state table. Do not remove calls to the DTMAIL_outcall function unless you want to disable outcalling notification.

IMC_OneCall

IMC_OneCall activates fax detection while recording voice messages for small (fewer than 1000 subscribers) voice messaging databases with the Brooktrout fax solution. Because of the way that it passes control back to state tables, we strongly recommend that you don't use it for larger voice messaging databases.

For small voice messaging databases, it lets callers leave a voice message and immediately start sending a fax on the same call. Message Center attaches the caller's message along with an identifier (This message is a fax).

Note: This feature does not currently work with any fax server other than the Brooktrout fax solution.

Commands

There are no commands.

Command line parameters

-d Set IMC_OneCall to disabled; Message Center doesn't use it. This is the default setting, so you need to reset it if you want to use IMC_OneCall.

IMC_OneCall

IPL status

Set the IPL status to AUTOEXEC. If you set it to INSTALLED, or stop it, Message Center might log errors in the DirectTalk error log indicating that it cannot find IMC_OneCall.

Control files

There are no control files.

Customization

You cannot customize this custom server.

IMC_Pager

IMC_Pager is a user exit from the IMC_OCALL_MAKE state table. It lets you use your own alphanumeric pagers. This custom server is supplied as a simple outline or stub function which returns success (0). You can add your own code, for example, to write a file in a specific format to a particular directory to be processed by a proprietary pager package. IMC_Pager is passed all the current data that is available in the state table IMC_OCALL_MAKE.

Commands

There are no commands.

Command line parameters

There are no command line parameters.

IPL status

Set the IPL status to AUTOEXEC.

Control files

There are no control files.

Customization

The source code for IMC_Pager is shipped with Message Center so that you can customize it.

Before making any changes, take backup copies of the originals.

If you do not need IMC_Pager, remove the calls to it from the IMC_OCALL_MAKE state table.

I IMC_Password

This custom server is used by state tables to enforce password reuse rules. It will prevent subscribers from reusing passwords that have been used within a predetermine number of days.

Commands

There are no commands.

Command line parameters

There are no command line parameters.

IPL status

Set the IPL status to AUTOEXEC.

Control files

The administrator can determine the minimum number of days that must pass before a password can be reused. This is set in the file \$CUR_DIR/ca/ini/IMC_MessageCenter.ini. Here is the relevant section from that file with the default setting:

```
[Passwords]
MinTimeReuse = 180
```

MinTimeReuse is in days. If this is set to zero, then passwords can be reused by subscribers as frequently as they like.

Customization

You cannot customize this custom server.

IMC_PhraseSlicer

IMC_PhraseSlicer takes a piece of text and breaks it into multiple phrases. The IBM ViaVoice text-to-speech engine uses it to allow subscribers to skip backward and forward through an e-mail message that is being played back to them using text-to-speech.

Commands

There are no commands.

Command line parameters

There are no command line parameters.

IPL status

Set the IPL status to AUTOEXEC if you are using the IBM ViaVoice text-to-speech engine. Set it to INSTALLED if you are using any of the other text-to-speech engines.

Control files

There are no control files.

Customization

You cannot customize this custom server.

IMC_PlayMsg

IMC_PlayMsg plays voice messages when a subscriber listens to a message. The use of IMC_PlayMsg is optional. If the variable *SimplePlay* is set to YES in the Global Variable Modification section of MCIT, IMC_PlayMsg is not used.

IMC_PlayMsg

IMC_PlayMsg lets you speed up or slow down the speed of playback, and increase or decrease the volume.

Commands

There are no commands.

Command line parameters

-N *maximum number of channels*

Number of channels in simultaneous use for IMC_PlayMsg. For example, if your system has 60 ports of Message Center, specify -N 60. If you omit this parameter, Message Center uses the actual number of channels configured on your system.

-V *dB level*

The default dB (decibel) level at which to play all messages. We recommend you use V -15. If you omit this parameter, Message Center makes an automatic adjustment, based on the maximum dB level in the recording.

IPL status

If you are using this custom server, set the IPL status to AUTOEXEC.

Control files

There are no control files.

Customization

You cannot customize this custom server.

I IMC_POP3_Client

State tables use IMC_POP3_Client to access e-mail messages that reside on remote POP3-compliant e-mail servers. This applies only to **Business - local & remote** and **Remote e-mail only** subscribers .

Commands

There are no commands.

Command line parameters

There are no command line parameters.

IPL status

Set the IPL status to AUTOEXEC.

Control files

Message Center can be configured to prevent subscribers from retrieving e-mail messages that are larger than a certain size. This is primarily for managing network bandwidth. This setting is in the file \$CUR_DIR/ca/ini/IMC_MessageCenter.ini. Here is the relevant section from this file with the default setting:

```
[POP3 Email]
# This is in bytes
MaxMessageSize = 4096
```


If MaxMessageSize is set to zero, then no restrictions will be placed on message size.

Customization

You cannot customize this custom server.

IMC_RA_MsgClient

IMC_RA_MsgClient is the client process to IMC_RA_MsgServer. It is not a custom server and it does not run on DirectTalk. It runs on the World Wide Web server system from which a Business - local & remote subscriber is accessing Message Center. IMC_RA_MsgClient runs only on an AIX Web server.

IMC_RA_MsgClient receives requests from RealAudio players and sends these requests to IMC_RA_MsgServer over TCP/IP. When IMC_RA_MsgClient receives the RealAudio data from IMC_RA_MsgServer, it passes it back to the RealAudio player on the subscriber's PC.

Before using IMC_RA_MsgClient, copy it to the Web server machine. This executable is in the \$CUR_DIR/ca/IMC_RA_MsgServer_dir/IMC_RA_MsgClient_dir directory.

Commands

There are no commands.

Command line parameters

IMC_RA_MsgClient has several command line arguments that are passed to it, but these are for internal use only and should never be invoked manually.

Control files

There are no control files.

Customization

You cannot customize this executable.

IMC_RA_MsgServer

| IMC_RA_MsgServer allows Business - local & remote and Remote e-mail only
| subscribers, accessing their voice messages from an IMAP4 or POP3-compliant e-mail
| client, to listen to the messages as streamed RealAudio. The RealAudio player invokes
| the CGI program IMC_RA_MsgClient. IMC_RA_MsgClient then sends the request to
| IMC_RA_MsgServer to retrieve the voice message and return the RealAudio data. This
| audio data is then returned to the RealAudio player on the subscriber's PC where it is
| then played through the sound card.

Commands

There are no commands associated with IMC_RA_MsgServer, but there is a client process. See "IMC_RA_MsgClient".

Command line parameters

There are no command line parameters.

IMC_RA_MsgServer

IPL status

Set the IPL status to AUTOEXEC.

Control files

There are no control files.

Customization

You cannot customize this custom server.

IMC_RemoteNames

IMC_RemoteNames lets you play audio names from remote systems. For more information, see “Setting up remote audio names and location names” on page 23.

Commands

There are no commands.

Command line parameters

There are no command line parameters.

IPL status

Set the IPL status to AUTOEXEC.

Control files

There are no control files.

Customization

You cannot customize this custom server.

IMC_RemoteSystems

IMC_RemoteSystems manages the remote systems databases for Message Center.

Commands

You use the RSA command with this custom server; see “Remote System Administration (RSA) utility” on page 96.

Command line parameters

There are no command line parameters.

IPL status

Set the IPL status to AUTOEXEC.

Control files

There are no control files.

Customization

You cannot customize this custom server.

IMC_Returnmail

IMC_Returnmail returns incoming e-mail messages rejected by the IMC_Getmail custom server.

IMC_Getmail places the rejected incoming e-mail files in the mail_rejected directory. IMC_Returnmail monitors this directory and returns any mail files from there to the sender. The files are then moved to the mail_archived directory.

Commands

There are no commands.

Command line parameters

-h Help for command line options.

-a *archive directory name*

The name of the directory where returned mail is archived. The default is /var/dirTalk/MessageCenter/mail_archived.

-r *reject directory name*

The name of the directory IMC_Returnmail looks in for rejected files. The default is /var/dirTalk/MessageCenter/mail_rejected.

-e *external id*

The external caller profile ID from which incoming messages from unknown external callers appear to be sent. The default is 999999.

-s *time* The interval, in seconds, between polls of the mail_rejected directory for new files. The default is 30 seconds.

-x Suppress archiving of rejected mail.

IPL status

Set the IPL status to AUTOEXEC if you are using external messaging; otherwise set it to INSTALLED.

Control files

There are no control files.

Customization

You cannot customize this custom server.

IMC_RunST

IMC_RunST lets the system administrator run a state table from a command line. For example, you might use this to refresh all the message waiting lights on user telephones if there has been a switch failure.

Commands

There are no commands.

Command line parameters

-e *entry point*

The entry point of the state table to use. If you omit this parameter, it defaults to Start.

-s *state table*

The name of the state table to be executed.

IPL status

Set the IPL status to INSTALLED.

Control files

There are no control files.

Customization

You cannot customize this custom server.

IMC_Scheduler

IMC_Scheduler handles notification of new messages by outcalling to a pager or handset, keeping an up-to-date list of all the outcalls to be scheduled, and performing them at the appointed time.

IMC_Scheduler has a dependency on the IMC_Notify custom server (page “IMC_Notify” on page 268) for managing outdialing notifications. IMC_Scheduler stops and restarts IMC_Notify to make sure they are sharing the same message queue.

Commands

There are no commands.

Command line parameters

-b *busy call-back delay*

Call-back delay (in minutes) if the notification number is busy. The default is 10 minutes.

-d *delay request call-back delay*

Call-back delay (in minutes) if the user asks for a delay. The default is 10 minutes.

-l *maximum lines*

Maximum number of lines (channels) to be used for outdialing. The default is 10.

-n *no reply call-back delay*

Call-back delay (in minutes) if there is no reply from the notification number. The default is 10 minutes.

-q

Don't start notification immediately; wait until the next events are due.

IPL status

Set the IPL status to AUTOEXEC.

Control files

There are no control files.

Customization

You cannot customize this custom server.

IMC_Sendmail

IMC_Sendmail creates and sends SMTP/MIME e-mail notes with voice and fax attachments when:

- Callers leave messages for subscribers who have chosen to forward their messages to e-mail systems, or
- Subscribers send messages to remote systems that support the VPIM standard.

IMC_Sendmail monitors the outgoing voice mailboxes defined in its control file. When it finds a new voice or fax message, IMC_Sendmail creates an SMTP/MIME e-mail or VPIM mail item:

1. Converting the voice or fax message to an audio or TIFF attachment
2. Attaching these attachments to the note
3. Sending the e-mail note to all specified destinations of the message.

At startup, IMC_Sendmail spawns one copy of itself for each mailbox to be monitored.

Commands

There are no commands.

Command line parameters

-c *control file*

The name of the control file containing the profile IDs to be used for outgoing messages. The default is
/usr/lpp/dirTalk/db/current_dir/ca/IMC_Sendmail_dir/control.file.

-e *e-mail id*

The default outgoing profile ID (555555) used when there is no control file.

-f *voice format*

The default format for raw voice. Formats are:

- | | |
|----------|----------------------------|
| 5 | GSM |
| 7 | G721 - this is the default |

-g *fax profile*

Lets you use something other than 333333 as the fax profile.

-l *time* The interval, in seconds, between polls of mailboxes for outgoing mail. The default is 60 seconds.

-n Suppress logging of outgoing mail.

IMC_Sendmail

-o *hostname*

The override host name for the sender's e-mail address. The default is the host name of the Message Center machine.

-p *logfile*

The name of the log file. The default is
\$CUR_DIR/ca/IMC_Sendmail_dir/sendmail.log.

-r

Disables the sending of audio names as *Originator-Spoken-Name*. You might find this useful if you are already using an alternative method of transmitting audio names to other Message Center systems. For example, you might be using NFS mounting (see "Setting up remote audio names and location names" on page 23).

-v *voice type*

The default voice type to use for send files. Types are:

- 1 raw
- 2 wav - this is the default
- 3 au
- 4 dt6

-x *external id*

The external caller profile ID from which incoming messages from unknown external callers appear to be sent. The default is 999999.

IPL status

Set the IPL status to AUTOEXEC if you are using external messaging; otherwise set it to INSTALLED.

Control files

The default control file (\$CUR_DIR/ca/IMC_Sendmail_dir/control.file) contains the profile ID to be used to temporarily hold messages bound for external destinations. Each profile ID has ten active mailboxes. The default control file contains one outgoing profile ID, 555555. Do not remove this profile ID from the file. If you need more outgoing mailboxes, add more profile IDs to this file, one profile per line. For example:

```
555555
555551
555552
```

Using this control file, Message Center will use up to 30 outgoing mailboxes simultaneously.

Customization

The only part of this custom server you can customize is `get_email_addr.c`. This translates the numeric remote destination to a VPIM or e-mail address.

IMC_Splicer

Use IMC_Splicer to concatenate two greetings and save them as a single greeting. A spliced greeting will usually be used as a bilingual greeting. For example, the first part of the greeting might be in French, and the second part will say the same thing, but in, say, English.

Commands

There are no commands.

Command line parameters

There are no command line parameters.

State table functions

Splice_Greeting

This function is called by a state table, such as IMC_BI_LING. It is passed the following parameters:

profile_id

The profile ID for which the greetings are to be spliced.

mailbox_id

The mailbox for which the greetings are to be spliced

Note: Message Center uses only one mailbox_id: 1.

first_greeting

The greeting ID (in the range 1 to 99) of the first greeting to be spliced.

second_greeting

The greeting ID of the greeting to be spliced after the first greeting.

spliced_greeting

The greeting ID of the new concatenated greeting to be saved.

IPL status

Set the IPL status to AUTOEXEC.

Control files

There are no control files.

Customization

You cannot customize this custom server.

IMC_Stats

IMC_Stats provides statistics information. If IMC_Stats is enabled, it creates a daily file of statistical information about actions performed in each call to Message Center. IMC_Stats can be called by the IMC_STATS state table (see page 226).

Single system image considerations

IMC_Stats, and the log files it processes, record statistics only for calls coming

into a particular single system image client system (or server system if the server also has telephony). The server does not retain statistics of the activities of all the clients; if you need this information, you have to combine the statistics files from each of the systems in the single system image cluster.

Commands

IMC_Stats supports the following command:

FormatStats

Formats the Message Center statistics file. For more information see page 68. This command is shipped in the \$CUR_DIR/ca/IMC_Stats_dir/utils directory.

Command line parameters

There are no command line parameters.

IPL status

Set the IPL status to AUTOEXEC if you use the statistics functions.

Control files

IMC_Stats can get information from /var/dirTalk/MessageCenter/IMCdefaults.file. This file is shared by other Message Center custom servers which have their own default entries. The entries in this file can specify global defaults for IMC_Stats. You might need to customize them for your installation.

The entries for IMC_Stats are:

Stats_ID

The destination ID of the stats reports. It can be any valid Internet address.

Stats_Location

The location of the reporting Message Center.

Stats_Mail_Password

Used by the receiving ID to validate the authenticity of the messages.

Stats_Mail_Termchar

Used to identify the end of the stats message data.

The IMC_Stats entries might look like this:

```
/* Stats Server defaults...*/  
Stats_Mail_Password = stats;  
Stats_Mail_Termchar = #;  
Stats_Location = location;  
Stats_ID = stats@vmnode.location.somewhere.com;
```

Each variable and its value must be separated by an equals sign (=) with one space on either side. Each entry must end with a semicolon.

Customization

The source code for IMC_Stats is shipped with Message Center, so that you can customize it.

Before making any changes, take backup copies of the original. The main file is called `record_stats.c`, and contains sample code to extract information from `IMCdefault.file` which can be used to mail reports to a nominated user. You can change `record_stats.c` to meet your location requirements.

Appendix E. DirectTalk system variables used by Message Center

Message Center state tables use DirectTalk system variables. For example, the IMC_STATS state table (see page 226) uses the global variable SV81 for statistics gathering.

All the Message Center state tables that can detect an error condition use SV51, SV52, and SV53 to save the state table name, and the state and result of the action that caused the error. This information is passed to IMC_LogError for logging.

Table 16 lists the system variables associated with user data fields. These system variables can be updated by state tables. Some of these user data fields can also be updated by a subscriber using the telephone, or an administrator using Message Center line commands, such as changeuser (see page 54).

For more information on the field names listed in the table, look in Table 7 on page 55. For information on all DirectTalk system variables, see *DirectTalk for AIX: State Tables, Prompts, and Voice Segments*.

Trigger variables are used to retrieve and update this data, setting SV20 to the caller number and SV32 to the mailbox ID to retrieve caller information, and SV25 to the receiver number and SV33 to the mailbox ID to retrieve receiver information. To update caller information with any changes, assign any value to SV380. To save any changes to receiver information, use SV450.

Message Center also uses many system variables at runtime. Most of these system variables are set based on settings in the file \$CUR_DIR/ca/ini/IMC_MessageCenter.ini while some are set based on the particular call type. These system variables are typically set by IMC_STARTUP for each call into Message Center. For a list of these runtime system variables and a description of what they are used for look in Table 18 on page 285:

Table 16. Mapping user data to system variables

Caller	Receiver	Message Center subscriber administration field
SV102	SV103	user_status
SV385	SV455	password_change_date
SV387	SV457	email_address
SV388	SV458	vpim_address
SV389	SV459	vpim_msg_del_pref
SV390	SV460	vpim_voice_type
SV396	SV466	department
SV398	SV468	deputy_number
SV399	SV469	temp_deputy_number
SV400	SV470	reachme_number

Table 16. Mapping user data to system variables (continued)

Caller	Receiver	Message Center subscriber administration field
SV401	SV471	temp_reachme_number
SV402	SV472	fax_number
SV403	SV473	temp_fax_number
SV404	SV474	fax_server
SV405	SV475	pager_number
SV406	SV476	pager_ref
SV407	SV477	temp_pager_number
SV408	SV478	temp_pager_ref
SV409	SV479	temp_referral number
SV412	SV482	operator_number
SV416	SV486	bilingual_grt
SV417	SV487	first_time_user
SV418	SV488	play_headers
SV419	SV489	delete_new_msgs
SV420	SV490	autosave_new_msgs
SV421	SV491	send_msg_address
SV422	SV492	clock_pref
SV426	SV496	msg_delivery_cos
SV427	SV497	transfer_cos
SV428	SV498	referral_cos
SV429	SV499	deputy_cos
SV430	SV500	notification_cos
SV433	SV503	days_del_saved_msgs
SV434	SV504	days_del_new_msgs
SV435	SV505	notif_sched_status

For notification schedules, set SV301 to the schedule number to retrieve the appropriate notification schedule for the caller (use SV341 for receiver), and any value to SV300 to update the caller's schedule (use SV340 for receiver).

For more information on the field names listed in the table below, look in Table 9 on page 58.

*Table 17. Mapping user data to system variables
(notification schedules)*

Caller	Receiver	Message Center subscriber administration field
SV301	SV341	-s flag (schedule ID)
SV302	SV342	sched_active
SV303	SV347	sched_main_number
SV304	SV344	sched_main_num_typ
SV305	SV345	sched_main_num_ref
SV306	SV346	sched_backup_number
SV307	SV347	sched_backup_num_typ
SV308	SV348	sched_backup_num_ref
SV309	SV349	sched_start_time
SV310	SV350	sched_notify_level
SV311	SV351	sched_stop_time
SV314	SV354	sched_days_of_week

Message Center also uses many system variables at runtime. Most of these system variables are set based on settings in the file \$CUR_DIR/ca/ini/IMC_MessageCenter.ini while some are set based on the particular call type. These system variables are typically set by IMC_STARTUP for each call into Message Center. For a list of these runtime system variables and a description of what they are used for look in Table 18below:

Table 18. Runtime system variables

System Variable	Configuration Setting	Description
SV54	CallingID	The number of the calling party.
SV55	CalledNumber	The number that was dialed.
SV56	CallSource	Whether the call was an internal or external call.
SV57	CallReason	Whether the call was received by Message Center due to a busy or a ring-no-answer.
SV58	ExtCallID	The profile to use for external callers.
SV59	QuickMsgID	The quick message profile.
SV60	AMISReceiverID	The AMIS receiver profile.
SV61	AMISSenderID	The AMIX sender profile.
SV62	SystemDistID	The system distribution lists profile.
SV63	FaxID	The FAX profile.
SV64	EmailID	The VPIM profile.

Table 18. Runtime system variables (continued)

System Variable	Configuration Setting	Description
SV65	OperatorNum	The number to which callers will be transferred when they choose to transfer to the operator.
SV66	PlayMsgKeys	The key used by IMC_PlayMsg while a message is being played.
SV67	ByNameKey	The key to press when dialing by name.
SV68	MenuStateTable	The state table containing the subscriber menus.
SV69	CMenuStateTable	The state table containing the caller menus.
SV70	InternalPrefix	The three letter prefix used by this version of Message Center.
SV71	CustomerPrefix	A three letter prefix used for state tables customized by a customer.
SV72	ExitStateTable	The state table that is invoked by IMC_MAIN when a SV74 is set to 200 in the subscriber state tables.
SV73	MenuLabel	The entry point for the subscriber state tables.
SV74	MenuReturnCode	The return code from the subscriber state tables.
SV75	SubscriberNumber	The profile of the current subscriber.
SV76	Destination	RESERVED FOR FUTURE USE.
SV77	DestinationType	RESERVED FOR FUTURE USE.
SV79	TPProfileInfo	Telephony portal subscriber settings.
SV241	PartitionVisb	Inter or intra partition visibility.
SV242	TTS_Engine	The TTS engine being used Enable or disable message undeletion.
SV243	MsgUndeletion	Enable or disable message undeletion.
SV244	RemoteDest	Whether the current destination is a remote destination or not.
SV245	LogonNumber	A flag indicating whether or not the called dialed one of the vmail extensions.
SV246	MaxPWAttempts	Maximum number of invalid password attempts allowed before a mailbox is locked.

Table 18. Runtime system variables (continued)

System Variable	Configuration Setting	Description
SV247	GlobalPWlimit	The maximum cumulative number of invalid passwords across all profiles that can be entered before Message Center stops access to all mailboxes.
SV248	ProfilePWlimit	The maximum cumulative number of invalid passwords that can be entered over a series of sign-on attempts before Message Center disables the mailboxstops
SV249	MinMessageTime	Minimum number of milliseconds that a message can have.
SV250	DisableCallSndr	Enable or disable the ability to dial the sender of a message.
SV251	DisableDeputy	Enable or disable the ability for callers to reach a deputy.
SV252	DisableJumpout	Enable or disable the ability for a caller to transfer to another number.
SV253	DisableOperator	Enable or disable the ability for a caller to transfer to the operator.
SV254	DisableReferral	Enable or disable the referral facility.
SV255	DisableXfer	Enable or disable the call transfer facility.
SV256	DisableReachMe	Enable or disable the ability for a caller to use the ReachMe facility.
SV257	DisablePageMe	Enable or disable the ability for callers to send pages.
SV258	DisableFax	Enable or disable the ability to receive faxes.
SV259	DisableSync	Enable or disable the CMC synchronization facility.
SV260	MCMainControl	
SV261	MCJumpOut	
SV262	FirstTimeUsage	Enable or disable the first time usage tutorial.
SV263	SimplePlay	Enable or disable simple playing of voice messages.
SV264	FwdTime	Number of milliseconds to jump forward when a subscriber presses the key to skip forward in a message.

Table 18. Runtime system variables (continued)

System Variable	Configuration Setting	Description
SV265	BackTime	Number of milliseconds to jump backwards when a subscriber presses the key to jump backwards in a message.
SV266	UniqueDlists	Whether to explicitly prompt for lists in IMC_SEND_MSG
SV267	SysDistAllowed	Whether or not access to system distribution lists is allowed.
SV268	PwdExpiryDays	The number of days before a password expires.
SV269	Bilingual	Whether bilingual greetings should be used or not.
SV270	SubscriberMailbox	The mailbox number of the current subscriber.

Appendix F. If you've used IBM Message Center for DirectTalk or DirectTalkMail before...

This appendix is for existing IBM Message Center or DirectTalkMail users. We start by looking at the enhancements we've made in three upgrades:

- The most recent, upgrading IBM Message Center for DirectTalk Version 6 Release 3 to IBM Message Center for DirectTalk Version 6 Release 4
- The previous upgrade, from IBM DirectTalk for AIX Version 2 to IBM Message Center for DirectTalk Version 6 Release 3
- The move from the IBM DirectTalkMail feature of DirectTalk Version 2.1 to IBM DirectTalkMail for AIX Version 2

We then look at the migration paths available to you before describing in detail the utilities we've provided to help you.

Enhancements in IBM Message Center for DirectTalk Version 6 Release 4

Enhancements in the upgrade from IBM Message Center for DirectTalk Version 6 Release 4 include:

- Support for POP3 servers. Subscribers can now listen to their e-mail messages that reside on POP3 compliant servers.
- Support for accessing LDAP servers. Subscriber can now use an LDAP server when performing the following functions:
 - Filtering e-mail messages
 - Composing and sending a voice message
 - Replying to a voice or e-mail messages
 - Forwarding a voice or e-mail message.
- Telephony portal. This will allow subscribers to receive and retrieve messages via the telephone without requiring mailboxes on Message Center. All necessary profile information is retrieved from an LDAP server.
- External configuration file. All Message Center configuration settings have been moved from within source code to an external configuration file, thus making initial installations and upgrades easier
- Defining a new class of administrator for mailbox management within partitions
- Isolating users and administrators in one partition from other users and administrators
- Additional security. This includes the following:
 - Preventing passwords from being reused within a specific time period
 - Restricting access to confidential e-mail via the TUI
- Web interface, introducing new features:
 - subscribers can create their own profiles
 - subscribers can send/ receive/reply to/forward messages via voice, fax and e-mail
 - administrators can add/remove/modify profiles

- WAP interface. Subscribers can now view e-mail over the WAP interface and change mailbox preferences by navigating through the WAP menu
- Brooktrout fax card support. This optional fax solution supports sending and receiving faxes in .TIFF/F format.
- NLS support. Message Center has been extended to support a variety of language options. The Message Center MCIT administration tool, voice segments, voice prompts, Web interface, WAP interface and documentation have all been translated for the following languages:
 - French
 - German
 - Italian
 - Japanese
 - Korean
 - UK English
 - US English

Enhancements in IBM Message Center for DirectTalk Version 6 Release 3

Enhancements in the upgrade from DirectTalkMail Version 2 include:

- The addition of *types* of subscriber:
 - Business - local & remote
 - Business - local
 - Residential
 - Remote e-mail only
- Support for the IMAP4 Audio Client Feature. Designed to work with text-to-speech (TTS) software, this:
 - Supports IMAP4-compliant e-mail servers
 - Uses any of the following text-to-speech engines to play back e-mail in US English:
 - Lernout & Hauspie BeST Speech
 - Fonix AcuVoice Speech Synthesizer AV2001
 - IBM ViaVoice Outloud TTS
- Support for the IMAP4 Server Feature, for use with IMAP4 e-mail clients, providing:
 - Integration with e-mail IMAP4 clients such as Lotus Notes Version 5.0, Netscape Version 4.0, and Microsoft Outlook 98
 - Playing voice mail on an e-mail client
 - Voice streaming from IMAP4 servers to e-mail clients
- A new user interface (MCIT) for system administrators that lets them add, change, and delete subscriber information.
- The ability to create partitions on a single Message Center system. This enables customers to create different voice messaging partitions for different areas of their business. This includes:

- Defining a new class of administrator for mailbox management within partitions
- Isolating users and administrators in one partition from other users and administrators
- A restructured information set:
 - We've turned what used to be Appendix A of the *IBM DirectTalkMail Version 2 Administrator's Guide* into a new book, the *IBM Message Center for DirectTalk: Subscriber's Guide*.
 - We've created five *Quick Reference* cards from the old single card, one for each type of subscriber

Enhancements in DirectTalkMail Version 2

Enhancements to DirectTalkMail in the upgrade from the DirectTalkMail feature of IBM DirectTalk for AIX included:

- "SMTP/MIME and VPIM support"
- "Integrating voice mail and e-mail"
- "Improved fax support" on page 292
- "Using tromboning instead of transfer" on page 292
- "Single system image support" on page 292
- "Managing remote systems" on page 292
- "Backup and restore utilities" on page 293
- "A new General Information and Planning book" on page 293

All these enhancements are, of course, part of IBM Message Center for DirectTalk, as the descriptions below indicate.

SMTP/MIME and VPIM support

Message Center can exchange messages with other voice mail systems which support **Voice Protocol for Internet Mail (VPIM)**, the standard for digital exchange of voice messages between different voice mail systems.

VPIM supports attaching voice and fax messages to SMTP/MIME e-mail. This gives the individual subscriber the option to have all voice and fax messages sent to an Internet e-mail address. Voice messages can be sent in DirectTalk voice message format to other Message Center systems, or in compressed GSM or 32KADPCM (used by VPIM), or .wav or .au format for playback using PC sound cards.

Integrating voice mail and e-mail

You can integrate voice mail and e-mail on any SMTP/MIME compliant mail systems. By configuring VPIM and SMTP/MIME appropriately, you can send simple text-based e-mails to the Message Center system's mailboxes, where they are converted to text-to-speech messages using US English Ultimedia. You can also:

- Forward these text messages to SMTP/MIME systems, where the text can once again be read as text
- View the text, as text, on the Message Center World Wide Web pages

Improved fax support

If Message Center detects a fax tone while playing a user greeting, it can transfer the call to a fax machine or fax server.

If the fax server supports VPIM or SMTP/MIME, Message Center can attach faxes to voice messages in mailboxes, from where subscribers can work with them. If the DirectTalk system uses the Brooktrout fax solution, it can receive faxes directly on the DirectTalk system's channels, and attach them to messages in subscriber mailboxes.

You can *send* faxes to fax machines by:

- Using SMTP/MIME to send to a fax server
- Using the Brooktrout fax solution

You can also forward the faxes as TIFF attachments to e-mail addresses, or view them on World Wide Web pages.

Using tromboning instead of transfer

Using the DTQA and DTXA adapters with DirectTalk lets you use **tromboning**: a call coming in on one DirectTalk channel can be connected directly with an outgoing call on another DirectTalk channel. You can use this instead of transferring using a switch. However, when the transfer completes, and the calling party is connected to the number to which the transfer was made, instead of the call being released from DirectTalk (as it is with a switch transfer), the two channels with the transferred call remain in use for the duration of the call.

The trombone feature lets you do additional functions when you transfer:

- If the party to whom you transferred hangs up, you can return to where you left off with Message Center. This is particularly useful when a subscriber transfers to the number from which a message was left, and wants to return to working with their messages after the call.
- If the original caller wants to cancel the transfer and return to where they left off with Message Center, they can do so by pressing a definable DTMF key.

Single system image support

Using the single system image (SSI) architecture in IBM DirectTalk for AIX Version 2 Release 2, Message Center can support a significantly increased number of simultaneous voice channels and mailboxes.

For information on getting the best out of your Message Center system, see your IBM representative.

Managing remote systems

The Remote Systems Administration (RSA) utility lets you configure and administer AMIS analog, VPIM, and SMTP/MIME, as well as the proprietary DirectTalkMail Digital (DTM-D) protocols.

It's also easier to manage audio names for subscribers on remote systems:

- For VPIM, the audio names are packed with the message, and unpacked on receipt.
- For other protocols, you can mount remote audio name directories using NFS, or copy them from one system to another using FTP.

Backup and restore utilities

Message Center provides backup and restore utilities for mailbox and message data. You can use them to back up your message and mailbox data without shutting down your system. You can also use them to merge data from multiple systems into a single system. This is useful if you want to migrate several standalone systems into a single system image cluster.

A new General Information and Planning book

Chapter 1 of previous editions of the *IBM DirectTalkMail for AIX: Administrator's Guide* provided some background information for DirectTalkMail users. With IBM DirectTalkMail Version 2, we turned this chapter into a comprehensive *General Information and Planning* book.

Migrating to IBM Message Center for DirectTalk Version 6 Release 4

You can migrate between DirectTalkMail systems and Message Center systems. You save the DirectTalkMail version, and import it into the new software release, then apply any or all of the migration utilities described below. Table 19 describes the migration paths we support.

Table 19. Message Center migration paths available

From	To
DirectTalkMail for AIX Version 2 (RPQ's 5799 GEX or GFF) on DirectTalk for AIX Version 2.2	IBM Message Center for DirectTalk on DirectTalk for AIX Version 2.2

Note: To migrate from the DirectTalkMail feature on DirectTalk/6000 Version 1, to IBM Message Center for DirectTalk Version 6.4 on DirectTalk for AIX Version 2.2, you must apply for a special bid via your IBM representative.
If you have extensive local modifications, make sure that they are applied to Message Center by an experienced developer or IBM Business Partner.

Migration utilities

Message Center provides three utilities to help you migrate data from DirectTalkMail:

- The IMC_DTMail_Migrate_V2_1 custom server to migrate user profiles (see page 295)
- The distribution list names migration utility to convert distribution list names from DirectTalkMail releases (see page 295)
- The remote system migration utility to convert remote system names and data from DirectTalkMail releases (see page 296)

migrating to IBM Message Center for DirectTalk Version 6 Release 4

If you are an existing user of IBM DirectTalkMail for AIX Version 2 (the PRPQ offering), you don't need to run any of the migration utilities to move to IBM Message Center for DirectTalk Version 6 Release 4.

When you migrate data, DirectTalk puts imported objects from different sources into different applications in the Application Manager. Imported objects from:

- A Version 1 database go in the Defaults application
- The Version 2.1 DirectTalkMail feature of IBM DirectTalk (not DirectTalkMail Version 2) go in the DirectTalkMail application
- DirectTalkMail Version 2 go in the DTMAIL4AIX_2 application
- Message Center go in the MessageCenter application

Message Center also provides four utilities to help you migrate data from existing standalone Message Center or DirectTalkMail for AIX Version 2 systems to a single system that you can then configure as the server in a single system image cluster. (Note that you must have already migrated all profiles to the Message Center or DirectTalkMail Version 2, and the systems must all be on DirectTalk Version 2.2.)

The utilities are:

vm_renumber

Renumbers message IDs on systems to be merged together. This ensures that there is no possibility of message IDs clashing, which could result in messages from one system overwriting messages from another system when the systems are merged.

For a complete description of vm_renumber, see “Voice message ID renumbering utility” on page 296.

vm_backup

Backs up all the mailboxes and messages on a system. It does not back up the programs (state tables, custom servers, prompts, voice tables, and voice segments) on a system. You back these up using the dtexport command.

For a complete description of vm_backup, see “Voice message and mailbox backup utility” on page 297.

vm_restore

Restores all the mailboxes and messages on a system. You can use settings on the utility to replace or merge the mailboxes and messages.

For a complete description of vm_restore, see “Voice message and mailbox restore utility” on page 298.

vm_integrity

Refreshes the integrity of the mailbox and message databases. If you merge several systems together, some of the system profiles which existed on each system will need updating on the merged system with the correct counts of messages that the profiles actually hold. This is what vm_integrity does.

For a complete description of vm_integrity, see “Voice message database integrity check utility” on page 299.

IMC_DTMail_Migrate_V2_1

Use IMC_DTMail_Migrate_V2_1 to migrate DirectTalkMail data from releases of IBM DirectTalkMail when it was a feature of IBM DirectTalk earlier than Version 2.1 to IBM DirectTalkMail for AIX Version 2. You need to run it only once. You don't need to run this custom server if you are moving from IBM DirectTalkMail for AIX Version 2 to Message Center.

Single system image considerations

Run IMC_DTMail_Migrate_V2_1 on only one of your single system image machines: the one on which you ran the restoreDT command. Previous releases of DirectTalkMail stored some data on local file systems rather than in the database. The machine on which you ran restoreDT should be the server machine in the single system image cluster.

Commands

The line command to use is **IMC_DTMail_Migrate_V2_1**.

Command line parameters

- a** Migrate all profiles in the system.
- e *profile_id***
Migrate just this profile.
- l** Migrate the profiles listed in the file created by the listuser command, **/usr/lpp/dirTalk/db/current_dir/oamlog/IMCprofilelist**.
- i *filename***
Migrate the profiles listed in *filename*.
- h** Online help.

IPL status

Set the IPL status to INSTALLED. **Do not** set it to AUTOEXEC, and **do not** start it from the Custom Servers Manager window. Start this custom server using the line command only.

Control files

There are no control files.

Customization

You cannot customize this custom server.

Distribution list names migration utility

The **migrate_dlistnames** command converts the format of distribution list names in releases of DirectTalkMail when it was a feature of DirectTalk to the current format. You'll find it in the \$CUR_DIR/ca/IMC_DTMail_Migrate_V2_1_dir/utlis directory.

It does not *delete* the old distribution list names (stored in voice segments in the directories DTM_DLIST_VSEGS, DVM_DLIST_VSEGS, and VOM_DLIST_VSEGS), or the user data associated with the names (stored in \$CUR_DIR/upmb_dir in the files userdata_db and .userdata_db) unless the **-d** parameter is specified. You can therefore

migrating to IBM Message Center for DirectTalk Version 6 Release 4

run a version of DirectTalkMail alongside Message Center during a migration period. At the end of the migration period we recommend that you remove the old voice segment directories and the user data database files.

Command line parameters

- a** Migrate all distribution list names on the system to the new format.
- e** *profile_id*
 Migrate just this profile.
- d** Delete old distribution list names and user data.
- p** *prefix*
 Migrate only from voice directories and custom servers starting with *prefix* (DTM, DVM, or VOM). If you omit this parameter, the utility searches *all* previous release names for data.

Remote system migration utility

The **migrate_remotesys** command converts the format of AMIS data and recorded names for profiles on remote systems and site names to the current format. You'll find it in the \$CUR_DIR/ca/IMC_DTMail_Migrate_V2_I_dir/utills directory.

If you don't want to migrate your old data, don't use this command. This command does not delete the voice segment directories or database files associated with the AMIS data for previous releases, unless you specify the **-d** parameter. This lets you run a version of DirectTalkMail alongside Message Center during a migration period. At the end of the migration period we recommend that you delete any old voice segment directories (starting DTM, DVM, or VOM), along with the custom servers for the old release where the AMIS data was originally stored.

Command line parameters

- d** Delete old remote systems databases and voice segments.
- p** *prefix*
 Migrate only from voice directories and custom servers starting with *prefix* (DTM, DVM, or VOM). If you omit this parameter, the utility searches *all* previous release names for data.

Voice message ID renumbering utility

On every Message Center or DirectTalkMail system, voice messages are given a voice message ID consisting of a number (the first message ever created on the system is number 1, the hundredth is message 100, and so on) and the date and time (to the nearest second) that the message was created.

If multiple systems are to be merged together, there is a small chance that voice message IDs on one system might conflict with those on another. To avoid this situation, which might result in some messages from one system overwriting messages on the other, the **vm_renumber** command lets you renumber all the message IDs on the systems to be merged together, so that each system has a distinct range of message IDs.

You can also run **vm_renumber** on the system into which all the systems have been merged, to reset all the numbers into a single sequence.

The **vm_renumber** command does not alter the date and time part of the message ID, only the number part.

We recommend that you shut down DirectTalk before you run **vm_renumber**, so that new messages don't arrive while the utility is running.

Command line parameters

-s *start number*

Start renumbering from this starting number (the default is 1).

Use this to ensure that you get unique message IDs for every system. For example, on the first system you could run **vm_renumber -s1**. **vm_renumber** will show what number it has reached (which is also the total number of messages on that system), for example 9847. On the second system you could then run **vm_renumber -s10000** to ensure that none of the IDs clash with the IDs on the first system. On the third system you could then run **vm_renumber -s20000**, and so on.

Voice message and mailbox backup utility

The **vm_backup** utility backs up all the voice message and mailbox data on a system.

This is *not* the same as a full system backup, which should be performed with **mksysb** and **savevg** commands. Furthermore, it doesn't back up any of the programs (state tables, custom servers, prompts, voice tables, and voice segments) which make up the Message Center application.

The DirectTalk objects that **vm_backup** backs up are: subscriber classes, application profiles, mailboxes, mailbox notification schedules, mailbox distribution lists, greetings, audio names, messages, and distribution list names. With an optional command line argument, you can also use it to back up the remote systems data, including any remote audio names on the system.

If you are backing up a system with the intention of merging several systems together, we recommend that you first shut down DirectTalk and run **vm_renumber** (see “Voice message ID renumbering utility” on page 296) before running **vm_backup**.

The **vm_backup** utility requires a significant amount of space in the file system in which it runs to create temporary files from the database before writing the data to the specified location. The amount of space will vary, depending on the size of your voice messaging database. Ensure that you have at least 10 MB free for a small voice messaging database, and at least 50 MB for a large voice messaging database. **vm_backup** deletes these temporary files when it finishes processing.

Command line parameters

-m Back up only the mailboxes and messages on a system (the default).

migrating to IBM Message Center for DirectTalk Version 6 Release 4

-a Back up the remote systems data (including any remote names accessible by the system) as well as the mailboxes and messages on a system.

-f filename

A filename or device on which to save the data. For example:

`-fvm.backup.dtmailsystem1`

`-f/dev/rmt0`

If you omit this option, the data is saved in a file called `vm.backup` in the directory in which the command was run.

Voice message and mailbox restore utility

The **vm_restore** utility restores all the voice message and mailbox data saved with the **vm_backup** utility. With an optional command line argument, you can also use it to restore the remote systems data, including any remote audio names, if this data was previously saved with the **vm_backup** utility.

By default, profiles created with the Message Center **adduser** utility are stored in the User application. This application exists by default on all systems. However, if you have previously moved profiles to other applications (such as MessageCenter, DTMAIL4AIX_2, or applications you have created), these applications must be created on the system on which the profiles are to be restored before those profiles can be restored on the system.

If you are restoring several systems on top of each other to merge the data together, you will see various errors generated informing you that duplicate profiles exist (these are usually Message Center system profiles, unless you have other duplicate profiles on your systems). We recommend that you run **vm_integrity** after restoring the systems to reset any message counts which might be incorrect.

The **vm_restore** utility requires a significant amount of space in the file system in which it runs to create temporary files from the database before restoring the data to the database. The amount of space will vary depending on the size of the voice messaging database being restored. Ensure you have at least 10 MB free for a small voice messaging database, and at least 50 MB for a large voice messaging database.

vm_restore deletes these temporary files when it completes its processing.

By default **vm_restore** runs in *insert* mode; it tries to insert data which is not already there into the database. This produces errors regarding duplicate profiles existing, as already noted. You can also run **vm_restore** in *replace* mode; it deletes all existing data in the database and replaces it with the data from the device or file you specified. There is also an *update* mode; **vm_restore** inserts data which is not already there into the database, and updates any duplicates between the two data sets with the data from the device or file you specify. This update mode takes much longer to run than insert mode because of the consistency checking required while duplicate rows are being updated.

Command line parameters

-m Restore only the mailboxes and messages on a system (the default).

- a Restore the remote systems data (including any remote names) as well as the mailboxes and messages on a system.
- f *filename*
A filename or device on which to save the data. For example:
-fvm.restore.dtmailsystem1
-f/dev/rmt0

If you omit this option, the data is restored from a file called vm.backup in the directory in which the command was run.
- r Run **vm_restore** in *replace* mode; delete all the existing data in your database and replace it with the data being imported. This mode is suitable for cloning a system or restoring an older version of data, but is unsuitable for merging systems together.
- u Run **vm_restore** in *update* mode. This produces fewer errors than insert mode, because duplicates in the database are updated according to the data being imported. However, update mode takes far longer to run because of the consistency checking involved in updating the duplicate entries (An insert can take several minutes to run, but an update can take several *hours*.)

Voice message database integrity check utility

The **vm_integrity** utility identifies any problems with your voice messaging database and, if you specify the **-f** (fix) parameter, tries to fix these problems.

It's a good idea to run **vm_integrity** on a system just after a migration from a previous release, or after merging data from several stand alone machines into a single system image server.

You also need to run **vm_integrity** if you change the *timezone environment variable* (TZ) on your system because of a geographical relocation of the machine or a change in the way summertime time differences are handled. This is because voice objects are filed according to the date and time that they were recorded, whereas the database uses an absolute time value. Therefore, the absolute time value could refer to various different times (or even dates) in different geographical time zones.

Always run **vm_integrity** without the **-f** option first to check that it can find the voice objects on your system. If the file system holding the directory on which the voice messages are stored (/home/dirTalk/current_dir/voice/msg) is unmounted, **vm_integrity** might assume that the database entries are now redundant and could all be deleted.

For the same reason, never schedule **vm_integrity** with the **-f** option to run on a regular basis or unsupervised. During normal operation of Message Center you should not need to run **vm_integrity**. We advise that, before running **vm_integrity**, you take a **vm_backup** in case any data is lost due to the voice message file system becoming unmounted.

If you specify no options, **vm_integrity** reports any problems it finds while comparing the database to itself and to the voice message files on disk. These problems might include:

- Voice messages found in unexpected directories (because of a change in timezone or summertime properties of the TZ environment variable)
- Voice message entries in the database with no corresponding voice files (because of a problem writing the voice file at the time of recording, such as a full file system or a system crash)
- Voice message entries in the database with an incorrect count of the number of recipients (because of some previous problem with the database)
- Voice messages with no corresponding mailbox (because of some previous problem with the database)
- Mailboxes with incorrect counts of the number of new, saved, or outgoing messages (because of multiple systems being merged together with **vm_restore** or some previous problem with the database)

Command line parameters

- f** Try to fix any problems found.

We recommend that you shut down DirectTalk before running **vm_integrity** with the **-f** option, as it is likely that response times for callers will be greatly impacted while it is running. It is also possible that messages left while **vm_integrity** is running might make it update a count of messages to an incorrect value.

- v** Compare the voice message files found on disk with the database entries for voice messages.

With the **-f** flag, this deletes any voice message files which do not have database entries. Always run **vm_integrity -f** before running **vm_integrity -v -f**. **vm_integrity -f** tries to correct the database entries of messages which have files in unexpected directories because of timezone differences; **vm_integrity -v -f** simply deletes any message files found without database entries.

- c** Don't check for the existence of voice message files which might be in unexpected directories. Instead **vm_integrity** checks only that the counts for the number of recipients for messages, and the counts of new, saved, and outgoing messages in mailboxes are correct. This eliminates the chance of problems caused by voice message files not being found.

- r** Reset all the counts to the correct values instead of querying the database for incorrect counts before attempting to correct them. (You can use this only with the **-c** parameter.)

Specifying **vm_integrity -r -c** might be faster than **vm_integrity -f -c** on smaller databases, and might be appropriate for running while DirectTalk is still receiving calls.

-e *mailbox number*

Check only the single mailbox specified for problems. If you also specify the **-f** parameter, the utility also tries to fix problems with the mailbox.

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Glossary

The following terms and abbreviations are defined as they are used in the context of Message Center. You'll find a more complete glossary of DirectTalk terms in any of the DirectTalk books. If you still do not find the term or abbreviation you are looking for, see *IBM Dictionary of Computing*, McGraw-Hill, 1994, or the *IBM AIX Version 4 Topic Index and Glossary*, SC23-2513.

Numerics

6300 Digital Trunk Adapter. See Digital Trunk Adapter.

6305 Digital Trunk Dual Adapter. See Digital Trunk Dual Adapter.

6309 Digital Trunk Quad Adapter. See Digital Trunk Quad Adapter.

6310 Digital Trunk Extended Adapter. See Digital Trunk Extended Adapter.

9291 Single Digital Trunk Processor. See Single Digital Trunk Processor.

9295 Multiple Digital Trunk Processor. See Multiple Digital Trunk Processor.

A

action. See state table action.

addressee. In Message Center, the subscriber to whom a message will be sent.

administrator profile. Data that describes a DirectTalk user. Information in an administrator profile includes ID, password, language preference, and access privileges.

alarm. Any condition that DirectTalk considers worthy of documenting with an error message. Strictly speaking, the term *alarm* should include only red (immediate attention) and yellow (problem situation) conditions, but it is also used to refer to green (a red or yellow message has been cleared) and white (informational) conditions.

AMIS. See Audio Messaging Interchange Specification (AMIS).

AMIS analog. The audio messaging interchange standard that specifies the use of DTMF tones to send control information, and analog signals for the message itself. It is the AMIS standard to which Message Center conforms.

announcement-only greeting. In voice mail, a greeting that does not give the caller an opportunity to leave a voice message.

application. See voice application.

application connectivity link (ACL). A service that transmits out-of-band information between DirectTalk and the Siemens Hicom 300 switch.

application profile. Data that describes initial actions to be performed when the telephone is answered. Information in an application profile indicates to the channel process what state table to load.

ARTIC960RxD Quad Digital Trunk PCI Adapter
. See Digital Trunk Quad Adapter.

Audio Messaging Interchange Specification (AMIS). A set of voice messaging standards designed to enable messages from different voice messaging systems to be interchanged. See also AMIS analog.

audio name. The audible name that corresponds to a specific application profile ID and mailbox.

auto-attendant. Automated attendant. A voice application that answers incoming calls and asks the caller which number or other service they'd like. In Message Center, an auto-attendant can be used to access subscribers' mailboxes when direct inward dialing (DID) is unavailable.

glossary

C

call. Telephone call. Often used to mean a single runtime instance of a voice application.

call forwarding. The process of sending incoming calls to a telephone number other than the called number.

called number. The number that a caller dialed. This typically identifies the mailbox that is to receive a message in a Message Center system.

called party. Any person, device, or system that receives a telephone call. Contrast with caller.

caller. (1) Any person, device, or system that makes a telephone call. (2) Often used to refer to any user of a voice application, even when DirectTalk has made an outbound call and the user is really the called number. (3) In Message Center, any person who makes a telephone call to a subscriber.

CallPath. Software that provides basic computer-telephony integration (CTI) enablement and comprehensive CTI functionality. This includes access to, and management of, inbound and outbound telecommunications.

call transfer. A series of actions that directs a call to another telephone number.

CAS. See channel associated signalling (CAS).

central office. A telephone switching system that resides in the telephone service provider's network. There are different types of central office switches, depending upon the role of the switch within the telephone network. Commonly, a central office switch connects customer lines to other customer lines or trunks and is the point at which local subscriber lines terminate for switching to other lines or trunks.

CGI. See Common Gateway Interface (CGI).

channel. One of the 24 channels carried on a T1 trunk, or one of the 30 channels on an E1 trunk.

channel associated signalling (CAS). A method of communicating telephony supervisory

or line signalling (on-hook and off-hook) and address signalling on T1 and E1 digital links. The signalling information for each traffic (voice) channel is transmitted in a signalling channel permanently associated with the traffic channel.

channel bank. A device that converts an analog line signal to a digital trunk signal.

channel number. The identifying number assigned to a licensed channel on the T1 or E1 trunk that connects DirectTalk to the switch, channel bank, or channel service unit.

channel process (CHP). The AIX process that executes the logic of the state table; each active caller session has one active channel process.

clear message. A message displayed by DirectTalk to tell the operator that a red or yellow error message has been cleared.

Common Gateway Interface (CGI). An interface to programs that provide services on the World Wide Web.

computer-telephony integration (CTI).

Connecting a computer to a telephone so that they share information and commands. Events from the computer can trigger events on the telephone system, and vice versa. The CTI connection can be on the desk top for one person or on the switch for use by many people. CTI can include simple facilities such as call transfer and screen pops, as well as more complex services, such as intelligent call routing, load balancing, and coordinating multiple call centers.

CTI. See computer-telephony integration (CTI).

custom server. A C language or C++ language program that provides data manipulation and local or remote data stream, database, or other services beyond those provided by the state table interface. Custom servers provide an interface between DirectTalk and business applications, functions, or other processes to give callers access to business information and voice processing functions such as speech recognition.

D

daemon. In the AIX operating system, a program that runs unattended to perform a standard service.

dB. Decibel.

DBIM. DirectTalk's internal database manager.

DDI. See direct inward dialing (DID).

development system. A DirectTalk system that is not used to respond to or make *live* calls; it is used only to develop and test applications.

dial. To initiate a telephone call. In telecommunication, this action is performed to establish a connection between a terminal and a telecommunication device over a switched line.

dial by name. To press the keys that correspond to a subscriber's name rather than their telephone number or extension.

dial tone. An audible signal (call progress tone) that indicates that a device such as a PABX or central office switch is ready to accept address information (DTMF or dial pulses).

DID. See direct inward dialing (DID).

digital signal processing (DSP). A set of algorithms and procedures used to process electronic signals after their conversion to digital format. Due to the specific mathematical models required to perform this processing, specialized processors are generally used.

Digital Trunk Adapter. The adapter that plugs into a Micro Channel[®] slot on an RS/6000 to complete the connection to a multiple digital trunk processor or a single digital trunk processor. Contrast with Digital Trunk Dual Adapter, Digital Trunk Extended Adapter, and Digital Trunk Quad Adapter.

Digital Trunk Dual Adapter. The adapter that plugs into a Micro Channel slot on an RS/6000 to complete the connection to two packs in a multiple digital trunk processor or a single digital trunk

processor. Contrast with Digital Trunk Adapter, Digital Trunk Extended Adapter, and Digital Trunk Quad Adapter.

Digital Trunk Extended Adapter. The IBM ARTIC960RxD Quad Digital Trunk PCI Adapter. In DirectTalk this adapter is known as a DTXA. It allows you to connect directly to the telephony network an RS/6000 unit that has a PCI bus; it doesn't need an external pack. Contrast with Digital Trunk Adapter, Digital Trunk Dual Adapter, and Digital Trunk Quad Adapter.

Digital Trunk Quad Adapter. An adapter that allows a Single Digital Trunk Processor or Multiple Digital Trunk Processor to be attached to an RS/6000 unit that has a PCI bus, including the model 43P and model E20. Contrast with Digital Trunk Adapter, Digital Trunk Dual Adapter, and Digital Trunk Extended Adapter.

digital trunk processor. See Single Digital Trunk Processor and Multiple Digital Trunk Processor.

direct dial in (DDI). See direct inward dialing (DID).

direct inward dialing (DID). A service that allows outside parties to call directly to an extension of a switch. Known in Europe as direct dial in (DDI).

DirectTalk. A voice processing system, bringing together telephone and data communications networks to use information stored in databases directly from a telephone.

DirectTalkMail. An earlier name for Message Center.

DirectTalkMail Digital (DTM-D). A digital protocol for exchanging voice messages very rapidly between Message Center systems.

disconnect. To hang up or terminate a call.

distribution list. In voice mail, a list of subscribers to whom the same message can be sent.

DTMF. See dual-tone multifrequency (DTMF).

glossary

dtuser. The name of the AIX account set up during the installation process for the use of all users of DirectTalk.

dual-tone multifrequency (DTMF). The signal sent by pressing one of the telephone keys. Each signal is composed of two different tones.

dynamic caller menu. A menu that is created *on-the-fly* and presented to the caller in a mailbox. The options on that menu are dependent on (1) the greeting that the subscriber has active, and (2) the options that the subscriber has configured.

E

E1. A digital trunking facility standard used in Europe and elsewhere, capable of transmitting and receiving 30 digitized voice or data channels. Two additional channels are used for synchronization, framing, and signalling. The transmission rate is 2048 kilobits per second. Contrast with T1.

e-business. A marketplace where businesses use Internet technologies and network computing to securely transform their business processes (using intranets), their business relationships (using extranets), and the buying and selling of goods, services, and information (using electronic commerce).

EDL. See exchange data link.

error message. Any message displayed by DirectTalk in the System Monitor as an alarm and optionally written to the DirectTalk error log, or to the AIX error log. Strictly speaking, the term *error message* should include only red (immediate attention) and yellow (problem situation) messages, but it is also used to refer to green (a red or yellow message has been cleared) and white (informational) messages.

exchange data link. A serial connection that carries messaging information between DirectTalk and a switch.

exit. A point in a supplied application from which control can be passed to another custom-written application. On completion, the custom-written

application passes control back to the supplied application. Exits are used in Message Center to enable you to provide additional function.

external messaging. In Message Center, a system that lets subscribers send messages to, and receive messages from, subscribers on other voice mail systems.

F

File Transfer Protocol (FTP). In Transmission Control Protocol/Internet Protocol (TCP/IP), an application protocol used for transferring files to and from host computers.

FTP. See File Transfer Protocol (FTP).

G

greeting. In voice mail, the recording heard by a caller when they reach a subscriber's mailbox. See also announcement-only greeting.

greeting header. In voice mail, a recording made by a subscriber and played to callers either before or instead of a personal greeting.

H

hang up. To terminate a call. See also disconnect.

hook flash. A signal sent to a switch to request a switch feature (such as call transfer).

HML. See Hypertext Markup Language (HTML).

hunt group. A set of telephone lines from which a non-busy line is hunted to handle, for example, an incoming call.

Hypertext Markup Language (HTML). A markup language that is specified by an SGML document type definition (DTD) and is understood by all Web servers.

I

IMAP4. See Internet Mail Access Protocol (IMAP4).

in-band. In the telephony voice channel, signals are said to be carried in-band.

incoming mail. In Message Center, new messages recorded by callers or sent by subscribers.

input parameter. Data received by a program such as a prompt, custom server, or state table from the program that invoked it.

integrated messaging. A messaging system in which more than one copy of a single message is stored, the copies being kept synchronized by the applications used to access them. Contrast with unified messaging.

Integrated Services Digital Network (ISDN). A digital end-to-end telecommunication network that supports multiple services including, but not limited to, voice and data.

Internet Mail Access Protocol (IMAP4). A standard protocol for accessing mail on an e-mail server, as defined in Internet Request for Comments (RFC) 2060.

ISDN. See Integrated Services Digital Network (ISDN).

K

key. One of the keys on the telephone keypad. In some contexts, the dual-tone multifrequency (DTMF) signal that corresponds to a key.

key pad. The part of the telephone that contains the push-button keys.

key pad mapping. The process of assigning special alphanumeric characters to the keys on a telephone key pad so that the telephone can be used as a computer terminal keyboard.

L

label. An optional name for a state in a state table.

licensed program product (LPP). A separately-priced program and its associated materials that bear an IBM copyright and are offered under the terms and conditions of a licensing agreement.

local area network (LAN). A network in which computers are connected to one another within a limited geographical area.

local system. A system that forms part of the Message Center single system image (SSI). Message Center sends voice messages to, and receives voice messages from, profiles on such systems, using built-in DirectTalk functions.

local variable. A user-defined temporary variable that can be accessed only by the program (state table or prompt) for which it is defined.

M

mailbox. In a voice mail system, the place where voice messages are stored.

mailbox number. An application profile with a profile ID that is usually the subscriber's extension number.

MB. Megabyte.

MCIT. See Message Center Interface Tool (MCIT).

megabyte. (1) For processor storage and real and virtual memory, 1 048 576 bytes. (2) For disk storage capacity and transmission rates, 1 000 000 bytes.

menu. A list of selectable actions available at different points in the operation of a program. In Message Center the menus are spoken.

message attributes. In Message Center, the priority, privacy, delivery date, and acknowledgment status of a voice message.

glossary

Message Center. A unified messaging application that runs on DirectTalk for AIX.

Message Center Interface Tool (MCIT). A menu-based application used to administer a Message Center system.

message delivery preference. The subscriber's choice of whether their voice mail is stored as voice mail only, as e-mail only, or as both voice mail and e-mail.

message delivery type. The format in which a voice message is delivered.

message header. In Message Center, information about the sender of a voice message and the date and time it was sent, which is usually played before the message itself.

message waiting indicator. A visible or audible indication (such as a light or a stutter tone) that a voice message is waiting to be retrieved.

Micro Channel. A bus, which conforms to the Micro Channel Architecture used in personal computers and individual workstations. This architecture defines the signals used by the various computer devices and interfaces connected to the bus.

Micro Channel Architecture. The rules that define how subsystems and adapters use the Micro Channel bus in a computer. The architecture defines the services that each subsystem can or must provide.

MIME. See Multipurpose Internet Mail Extensions (MIME).

Multiple Digital Trunk Processor. The IBM 9295 Multiple Digital Trunk Processor. The combination of a number of digital signal processing cards and supporting equipment that provides high-level voice compression, high voice quality, and digital telephone signalling functions (transmit and receive) using an external shielded cable to an attached IBM RS/6000 computer. See also Single Digital Trunk Processor.

Multipurpose Internet Mail Extensions (MIME).

A protocol used on the Internet for extending e-mail capability and integrating it with other forms of communication, such as voice mail and fax.

MWI. See message waiting indicator.

N

Network File System (NFS). The AIX implementation of the Network File System product from Sun Microsystems. In a single system image (SSI), NFS is used to attach voice files and custom servers from the SSI server system.

node code. In Message Center, the numeric code that identifies remote nodes.

notification schedule. In Message Center, the specification of times and phone numbers at which the subscriber is to be notified about incoming messages. The priority of messages required to trigger a notification is also specified in the schedule.

O

off-hook. A telephone line state, usually induced by lifting a receiver, in which the line is ready to make a call.

on-hook. A telephone line state, usually induced by hanging up a receiver, in which the line is ready to receive a call.

out-of-band. Within the telephony signalling channel, as opposed to the voice channel, signals are said to be carried out-of-band.

outgoing mail. In voice mail, messages sent by a subscriber to another subscriber on the same system, which have not yet been accessed by the addressee.

P

partition. A logical division of a Message Center system that has its own administrator and

subscribers who can be isolated from other subscribers outside that partition.

partition administrator. An administrator with permission to perform subscriber administration only for a particular partition.

password. A unique string of characters known to a computer system and to a user, who must specify the character string to gain access to the system and to the information stored in it.

peripheral component interconnect (PCI). The rules that define how subsystems and adapters use the Intel bus in a computer.

personal directory. A directory of up to ten entries that certain subscribers can maintain using a Web interface. This personal directory enables subscribers to (1) filter their remote e-mail messages based on a particular person or group of people, and (2) forward remote e-mail messages to other people listed in this directory.

personal greeting. In voice mail, a greeting recorded by a subscriber. Contrast with system greeting.

port. In time-slot management, one end of a 64 kbps unidirectional stream which can be attached to the SCBus.

port set. In time-slot management, a collection of ports which can be connected using a single CA_TDM_Connect() API call to a complementary collection of ports. An example of a port set is the transmit-receive pair corresponding to one telephony channel on a DTQA.

private automatic branch exchange (PABX). An automatic private switching system that services an organization and is usually located on a customer's premises.

private branch exchange (PBX). A switch inside a private business that concentrates the number of inside lines into a smaller number of outside lines (trunks). Many PBXs also provide advanced voice and data communication features.

process a call. To answer the telephone and perform the appropriate tasks.

production system. A DirectTalk system that is used to respond to or make *live* calls. A production system can also be used to develop new applications.

program temporary fix (PTF). An update to IBM software.

program data. Application-specific data that can be associated with a call transfer from CallPath to DirectTalk, or in the opposite direction. This is equivalent to CallPath program data, but DirectTalk imposes the restriction that the data must be a printable ASCII character string, with a maximum length of 512 bytes.

pushbutton. (1) A key on a telephone key pad. (2) A component in a window that allows the user to invoke a specific action.

pushbutton telephone. A type of telephone that has pushbuttons. It may or may not send tone signals. If it does, each number and symbol on the key pad has its own specific tone.

Q

quick message number. In Message Center, the number that callers can dial to send messages to subscribers without ringing their phone and without having to sign on to Message Center.

quiesce. To shut down a channel, a trunk line, or the entire system gracefully. The shutdown is performed on a channel-by-channel basis. Channels in an idle state are shut down immediately. Channels processing calls are shut down at call completion.

R

reboot. To reset or restart the RS/6000.

reduced instruction set computer (RISC). The system on which DirectTalk runs, specifically referred to as an IBM RS/6000.

referral number. The phone number to which calls are routed when call forwarding is active.

glossary

remote e-mail. E-mail stored on a separate e-mail server rather than within the Message Center system. In order to be accessible by Message Center, such remote e-mail servers must be Internet Mail Access Protocol (IMAP4)-compliant.

remote name. A voice file for the spoken names of profiles on a remote system.

remote node. See remote system.

remote system. Any system with which Message Center can exchange voice messages, including other Message Center systems and other suppliers' voice mail systems.

result. An indicator of the success or failure of a state table action, returned by DirectTalk to the state table.

result state. The state following each of the possible results of an action.

RISC. See reduced instruction set computer (RISC).

S

segment ID number. One or more numbers used to identify a voice or prompt segment.

sign-on prompt. In Message Center, the prompt that asks subscribers to enter their extension number and password (heard when subscribers dial Message Center's number or selects sign-on when listening to a greeting).

Signal Computing System Architecture (SCSA). An architecture that supports the interoperability of software and hardware components developed by different vendors in the computer telephony industry.

Signal Computing bus (SCbus). A time division multiplexed (TDM) hardware bus that interconnects different vendors' computer telephony adapters. Specified as part of Signal Computing System Architecture (SCSA).

signalling. The exchange of control information between functional parts of the system in a telecommunications network.

signalling process. A DirectTalk component that controls signalling for an exchange data link or common channel signalling protocol. Some signalling processes are supplied with DirectTalk, and others can be custom-written.

Signalling System Number 7 (SS7). A signalling protocol used to communicate between telephony equipment.

Simple Mail Transfer Protocol. The base TCP/IP protocol for sending and receiving e-mail.

Simplified Message Service Interface (SMSI). A protocol running on a serial connection (see exchange data link) that carries messaging information between DirectTalk and Lucent or AT&T switches.

Single Digital Trunk Processor. The IBM 9291 Single Digital Trunk Processor. The combination of a single digital signal processing card and supporting equipment that provides high-level voice compression, high voice quality, and digital telephone signalling functions (transmit and receive) using an external shielded cable to an attached IBM RS/6000 computer. The Single Digital Trunk Processor supports one T1 or E1 trunk. See also Multiple Digital Trunk Processor.

Single System Image (SSI). A cluster of DirectTalk systems that are connected together using a local area network. Each system (known as a node) in the cluster is configured as either a client or a server.

SMIT. See System Management Interface Tool (SMIT).

SMSI. See Simplified Message Service Interface (SMSI).

SMTP. See Simple Mail Transfer Protocol.

SNA. Systems Network Architecture.

special character. A character that is not alphabetic, numeric, or blank. For example, a comma (,) or an asterisk (*).

speech synthesis. The creation of an approximation to human speech by a computer concatenating basic speech parts together. See also text-to-speech technology.

state. One step in the logical sequence of actions that comprises a DirectTalk voice application.

state table. A list of all the actions used in a particular voice application. A component of DirectTalk.

state table action. One instruction in a set of instructions contained in a DirectTalk state table that controls how DirectTalk processes various operations such as playing voice prompts or recording voice messages. See also state.

subscriber. In voice mail, any person who owns a mailbox. Contrast with caller.

subscriber class. A named set of variables used to define a specific level of service available to telephone subscribers, such as maximum number of messages per mailbox and maximum number of members per mailbox distribution list.

subscriber type. A setting for a subscriber that determines which menu options and features are available to that subscriber and to callers into that subscriber's mailbox. There are a Standard set of menus and options, and an additional four subscriber types: Business - local & remote, Business - local, Remote e-mail only, and Residential.

super administrator. An administrator who can create and delete partitions. This administrator can also perform subscriber administrator for any partition.

switch. A generic term used to describe a telecommunications system that provides connections between telephone lines and trunks.

system administrator. The person who controls and manages the DirectTalk system by adding users, assigning account numbers, and changing authorizations.

system greeting. In voice mail, a default greeting heard by callers to the mailboxes of subscribers who have not recorded a personal greeting or who have selected the system greeting. Contrast with personal greeting.

System Management Interface Tool (SMIT). A set of utilities that can be used for various purposes, such as loading DirectTalk software, installing the exchange data link, and defining SNA profiles.

system parameter. A variable that controls some the behavior of DirectTalk or applications running under DirectTalk. System parameters are set using System Configuration or Pack Configuration options on the Configuration menu. Some system parameter values are assigned to system variables when an application is initialized.

system variable. A permanent global variable defined by DirectTalk for use by state tables. Many system variables are loaded with values when the state table is initialized. Some values are taken from system parameters.

T

T. A digital trunking facility standard used in the United States and elsewhere, capable of transmitting and receiving 24 digitized voice or data channels. The transmission rate is 1544 Kilobits per second. Contrast with E1.

tag image file format/fax (TIFF/F). A graphic file format used to store and exchange scanned fax images.

TCP/IP. See Transmission Control Protocol/Internet Protocol (TCP/IP).

text-to-speech (TTS). The process by which ASCII text data is converted into synthesized speech. See also speech synthesis.

TIFF/F. See tag image file format/fax (TIFF/F).

glossary

time slot. The smallest switchable data unit on a data bus, consisting of eight consecutive bits of data. One time slot is equivalent to a data path with a bandwidth of 64 Kbps.

token-ring network. A ring network that allows unidirectional data transmission between data stations by a token-passing procedure over one transmission medium so that the transmitted data returns to the transmitting station. A token-ring network can be used as a local area network (LAN) for DirectTalk-to-BBN Hark Recognizer communication.

tone. An audible signal sent across a telephone network. There are single (one-frequency) tones, tritones (three sequential tones at different frequencies), dual tones (two simultaneous tones at different frequencies), and dual sequential tones. Each has a different meaning..

transaction. A specific, related set of tasks within an application that retrieve information from a file or database. For example, a request for the account balance or the available credit limit.

transaction messaging. The ability to associate an item of data, such as a transaction identifier, with a voice message. The voice message can subsequently be retrieved by referencing the data value.

transfer. See call transfer.

Transmission Control Protocol/Internet Protocol (TCP/IP). A communication subsystem that is used to establish local area and wide area networks.

trombone. A connected voice path that enters an IVR from a switch on one circuit, then returns to the same switch on a parallel circuit. Two IVR ports and two circuits are used, but in some circumstances this might be the only way to make a connection between two callers if the attached switch does not support a Call Transfer function. Also known as double-trunking.

trunk. A telephone connection between two central offices or switching devices. In DirectTalk, a trunk refers to 24 or 30 channels carried on the same T1 or E1 digital interface.

TTS. See text-to-speech technology.

U

unified messaging. A messaging system in which a single copy of a message is stored and accessed by multiple applications (for example, voice mail and e-mail). Contrast with integrated messaging.

user. Someone who uses Message Center as a system administrator, application developer, or similar. Contrast with caller.

V

variable. A system or user-defined element that contains data values used by DirectTalk voice applications.

voice application. A DirectTalk application that answers or makes calls, plays recorded voice segments to callers, and responds to the caller's input.

voice bridge. A device that connects a telephone switch to DirectTalk.

voice directory. A list of voice segments identified by a voice directory name. Voice directories can be referenced by prompts and state tables.

voice mail. The capability to record, play back, distribute, and route voice messages.

voice mailbox. The repository for incoming messages for a voice mail subscriber. It may also contain data about how incoming calls or messages are to be handled. For example, it may identify the ReachMe number, notification schedules, e-mail address to which messages are to be sent, and so on.

voice message. In Message Center, a recording made by a caller for later retrieval by a subscriber.

voice messaging. The capability to record, play back, distribute, route, and manage voice recordings of telephone calls through the use of a

processor, without the intervention of agents other than the callers and the message recipients.

Voice Protocol for Internet Messaging (VPIM).

Standard for digital exchange of voice messages between different voice mail systems, as defined in Internet Request For Comments (RFC) 1911.

voice recognition. The capability of a computer to understand the spoken word for the purpose of receiving commands and data input from the speaker.

voice segment. The spoken words or sounds that comprise recorded voice prompts. Each segment in an application is identified by a language, a voice directory name, and a segment ID and usually includes accompanying text.

voice table. A grouping of voice segments in a table for access using an index, such as the numbers 0 to 9 or the letters A to Z. Voice tables can be referenced by prompts, but not directly by state tables.

VPIM. See Voice Protocol for Internet Messaging (VPIM).

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